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Tennessee Emergency Operations Center
and
Joint Forces Headquarters Expansion

SBC 529/000-02-2019-01
Nashville, Davidson County, TN

Program Document

April 11, 2023

Goodwyn Mills Cawood, LLC.
GMC Project No. ANAS 220042
NASHVILLE, TENNESSEE

Mechanical, Electrical, & Plumbing
Henderson Engineers
FRANKLIN, TENNESSEE

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Section I – Project Summary

Overview

The State of Tennessee approved a new USPFO Warehouse project in Smyrna, Tennessee along with funding for a New Emergency Operations Center in the Fiscal year 23 budget. Currently the warehouse functions for USPFO are housed in Building 110 on the Joint Forces Headquarters facility. The relocation of the warehouse functions opens up the opportunity for a new footprint at the joint forces headquarters to allow for a new State of the Art Emergency Operations Center for the State of Tennessee to be developed along with the opportunity to expand the offices of the National Guard on the main campus.

This document is intended to provide the guidance on the necessary phasing and programing of the facilities relocation and construction. The program document is to provide guidance and direction for the further the design development and identify the probable cost and timeline for the project.

Existing Campus Reference Plan

- A TEMA/State Guard Bldg 130 and 131 (31,832 SF & 532 SF)
- B PX Bldg 140 (5,886 SF)
- C War Records Bldg 150 (7,907 SF)
- D Org Storage Bldg 152 (5,837 SF)
- E Old Locksmith Bldg 153 (1,843 SF)
- F FMS 9 Bldg 165 (4,402 SF)
- G TEMA Radio Repair Bldg 104 A-E (5,455 SF)
- H USPFO Contingency Storage/HHD OCIE Storage (14,848 SF)
- I Org Storage Bldg 121 & 122 (13,931 SF)
- J GSA Vehicle Shop Bldg 120 (5,906 SF)
- K TEMA Radiological Maintenance Bldg 103 (4,203 SF)
- L USPFO Warehouse/J9/Fitness Area/Mailroom Bldg 110 (81,424 SF)
- M Commissioner/J-Staff/ARNG CMD/G-Staff Hugh Mott Bldg 108 (30,812 SF)
- N Admin Services/TEMA Bldg 102 (19,250 SF)
- O JAG/USPFO DPC Bldg 100 (14,273 SF)
- P Clement Nunnally Bldg 101 (14,238 SF)
- Q Hall of Flags Bldg 100 (21,329 SF)
- R ANG CMD/301 TC/R&R/FIN DETs/IG Bldg 100 (23,744 SF)

Project Phasing

Once the warehouse functions are relocated to the new facility in Smyrna, Building 110 can be demolished to make room for the new Emergency Operations Center (EOC) and National Guard office expansion. In preparation for the demolition of that facility, the project will require various phases and relocation of various departments. The following outline of the phases of work that will be required to accommodate the new headquarters' footprint.

Phase 1 - Department Relocations, Chapel, and J9 Storage

In preparation of the renovations at Clement Nunally of the project, the current building occupants of the Clement Nunally building will be required to be temporary relocated to other areas in the headquarters' facility. This will require the TEMA occupants that are currently housed in Building 100 to be consolidated into the basement offices of TEMA. This will allow for the 105th Troop unit to be temporarily relocated to the space that was vacated by TEMA until they can be permanently relocated to the Mott Building once the facility in Smyrna is complete and their permanent space becomes available. The MICO also currently located in the Clement Nunally facility will also be required to be temporarily relocated into Building 110. The Learning Lab, currently located in Clement Nunally, will be temporarily relocated to Building 100. These existing areas will not require major renovation only a small refresh. Walls will be repainted only. All other finishes shall remain.

While renovation is underway in these areas, two adjacent areas will be renovated for the permanent locations for the J9 funeral storage area and the Chapel, both of which are currently located in Building 110. These areas will require minor renovation as outlined in the recommended solutions.

The following areas will require relocation in this Phase:

Relocations Part 1:

- TEMA Mitigation suite currently in building 100 will need to be consolidated into other
  TEMA areas
  The current Media workroom requires temporary relocation
- Server Room in Building 100 to be consolidated into one room

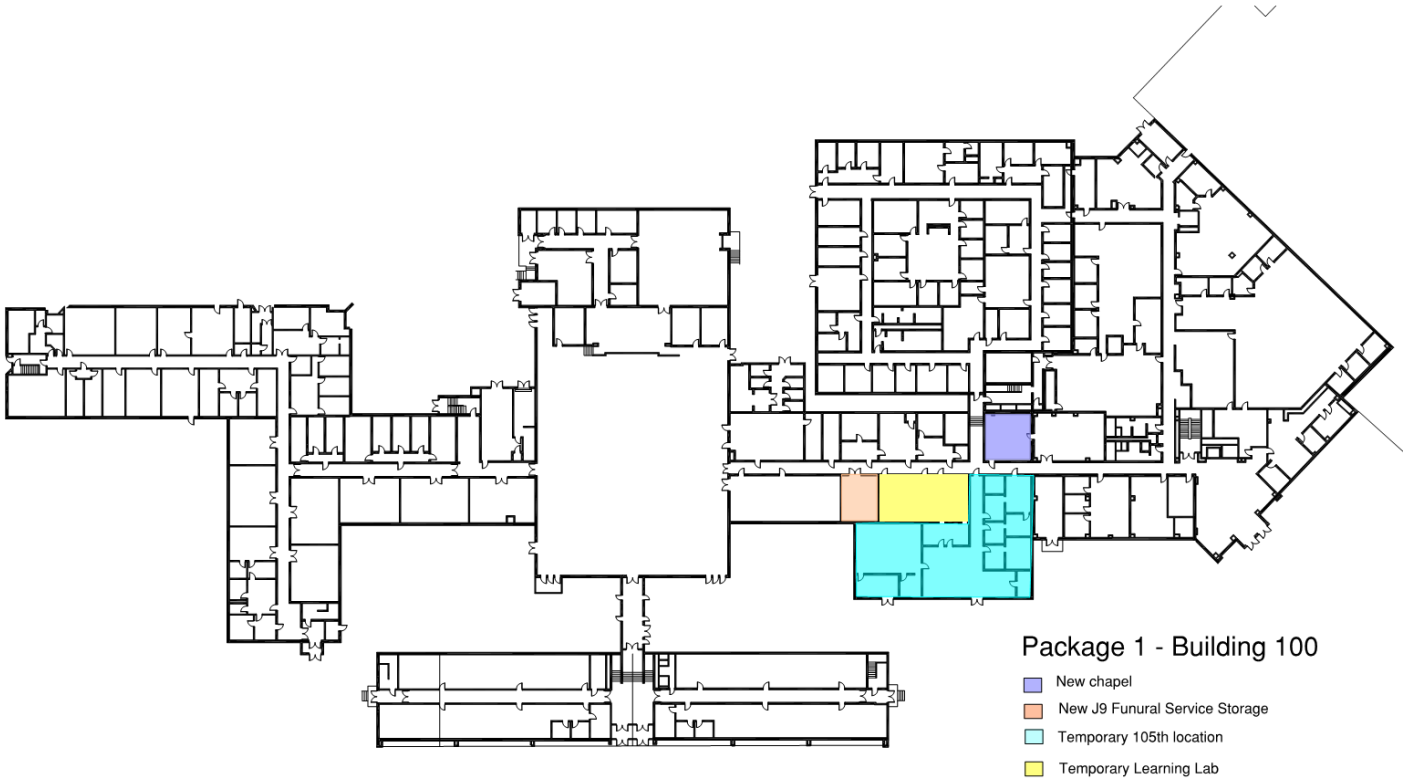
Relocations – Part 2

- 105th PC– Temporarily relocated from Clement Nunally to the TEMA mitigation suite office area in Building 100
- Learning Lab – Temporarily relocate from Clement Nunally to the current Media area in Building 100
- MICO – Temporarily relocate from Clement Nunally to designated area in Building 110
- 118th MPAD – Relocate from Clement Nunally to designated area in Building 110

Permanent relocations:

- Chapel – Relocate Chapel to new designated location (former Server Room) in Building 100

- J9 Storage – Relocated from Building 110 to designated area in Building 100



Phase 2 – (Project 1 Package) - Clement Nunally Renovation, Temporary Gym, New Mailroom and Learning Lab

This Phase will be required to be completed in two phases. The first phase includes the renovation of the Clement Nunally facility. Once the completion of Phase I and occupants have been able to relocate into the Clement Nunally facility, the second phase may begin. Phase 2 will include the completion of the Temporary Gym, New Mailroom on the North side of the campus and the build out of the new permanent learning lab in the former ID space in Building 100.

Phase I

The renovation of the Clement Nunally facility will relocate public facing functions to the front of the campus and free up space that will be later be able to be used for relocation of departments at a later phase.

The following areas are to be permanent relocated into the Clement Nunally facility upon completion:

First Floor:

- PX
- War Records

Second Floor:

- ID Center
- Recruitment Office
- J9 Offices
- MICO or other MTOE Unit

Phase 2

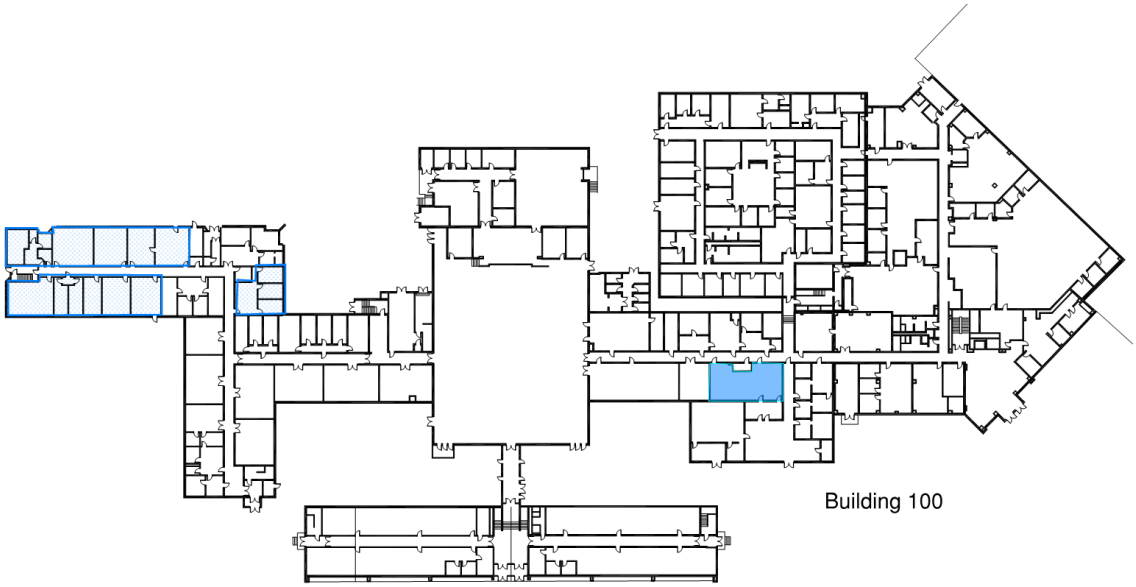
The exiting gym and mailroom are currently located in Building 110 which will be demolished when the warehouse functions are relocated. The Gym will eventually move into the new addition that will replace Building 110, but in the interim will be required to be temporarily housed in the former War Records facility – Building 150. The Mailroom will be permanently relocated to the former PX, Building 140 on the North side of the campus.

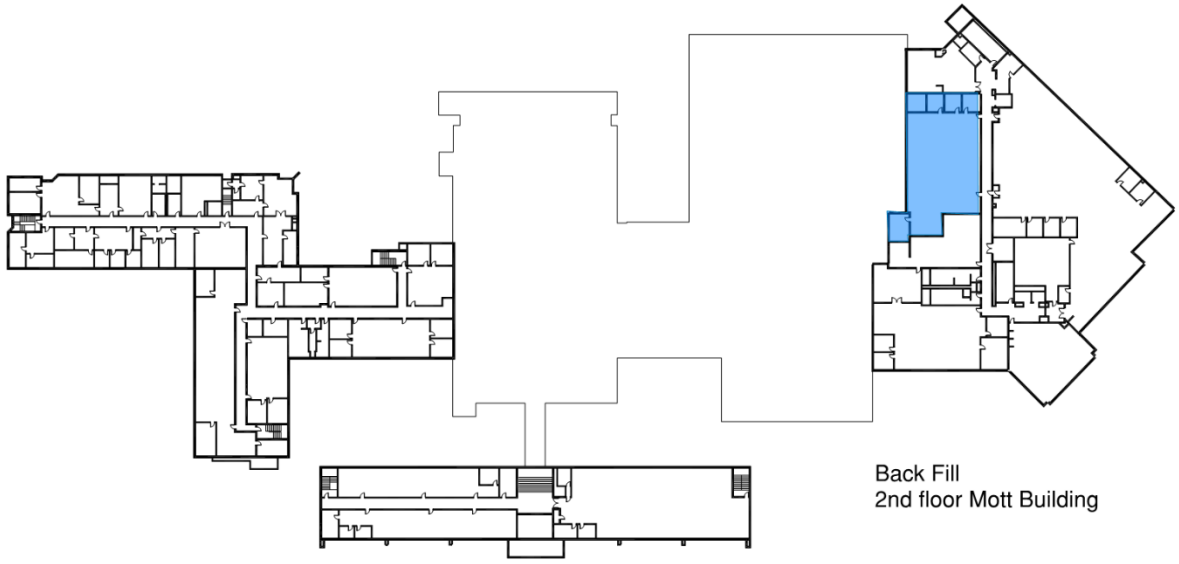
The Learning Lab, which is currently located in Clement Nunally and temporary relocated in Phase I will be relocated to its permanent new location in Building 100. The space will require minor renovation to accommodate the new function.

Phase 3 - Backfill Opportunities

Upon the completion of the new Learning Lab space, the former temporary space in Building 100 will become available for backfill. Area currently housed by the 301st TC, may become available for back fill on the first floor of Building 101. (Timing of this space become available is not defined at the time of this report).

Upon completion of the new warehouse facility in Smyrna, space on the 2nd floor of the Mott building will become available for backfill.





Phase 4- (Project Package 2) - New EOC, Office Expansion and Parking Structures

This phase of the project includes the new parking structures to address the additional parking requirements with the new addition, demolition of Building 110 to make room for the new Emergency Operations Center and Headquarters office expansion. The new addition is planned to be 260,000 g.s.f. and shall include space for a new Emergency Operations Center and related support areas, offices for the Tennessee Emergency Management Agency, Auditorium space, Fitness Gym, and additional office space for the National Guard. The addition of new space will increase the personnel count on the campus. This will generate the need for additional parking. The below outline identifies a shortage of 566 parking spaces on the South campus parking need once the addition has been added. To accommodate the additional parking requirements, two parking structures are proposed on the site, one to the south of the headquarters building and the second to expand the existing parking structure on the north side for the headquarters building.

The following is an overview of the divisions along with their parking needs. Parking needs have been determined by taking 90% of the anticipated full time head count. For square footages that have not been assigned a occupancy, an assumed occupancy was determined by using the ratio of 1 person per 300 square feet.

National Guard Headquarter - Upper Campus Parking

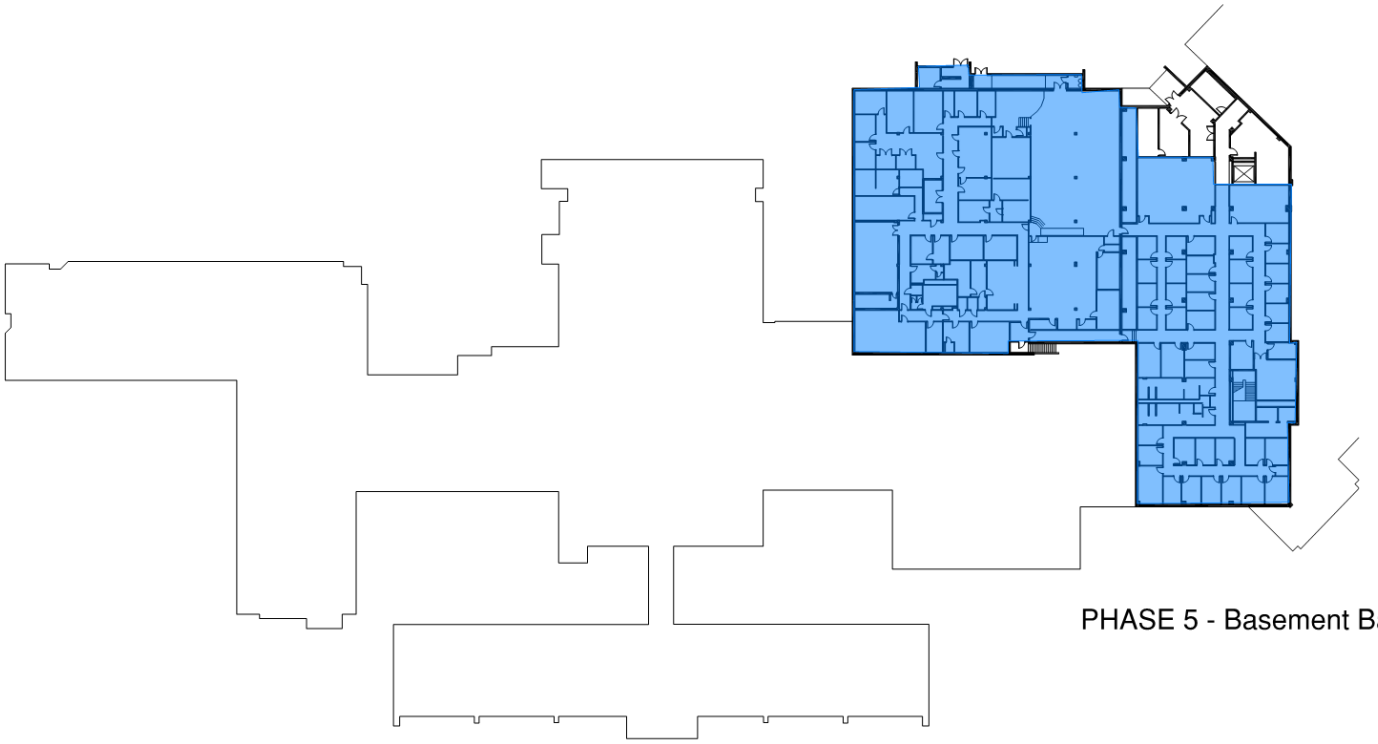
Department	Parking Need
Addition	
TEMA	207
MPAD/Public Affairs	28
105th	76
HRO	32
Air National Guard	28
State Administration/ F&A	29
30th Troop Command	44
230 Support Troop	30
Counter Drug	40
Visitor	4
	518
Mott Building	
TN Command/TAG/Sr. Listed	15
JAG	13
State Legal	4
Army Command	7
G4	26
USPFO/Contracting TM	88
G1/Education	46
G3/MRO	18
J2	8

DOMS/ATFP		7
J6		36
CFMO		51
Visitor		7
		326
Clement Nunally		
J9		26
D Troop		105
Recruiting		1
ID Card		1
PX		4
War Records		4
Public Parking		12
		153
Building 100		
1128 Finance		25
1129 Finance		25
301 TC		33
Band		48
HHD		16
Inspector General		7
Recruiting Retention		32
Recruiting Retention B Company		3
		189
	Square Footage	Projected Staff
Available Square Footage		
Former Administrative Services Backfill	16492	55
Former G8 office Space	3745	12
Former HRO spaces Backfill	5510	18
Former PA Suite	1555	5
Former TEMA space Backfill	34961	117
		208
Total		1394
	Multiplier	0.9
PROJECTED PARKING NEED		1254
CURRENT PROVIDED		688
ADDITIONAL PARKING REQUIRED		**566**

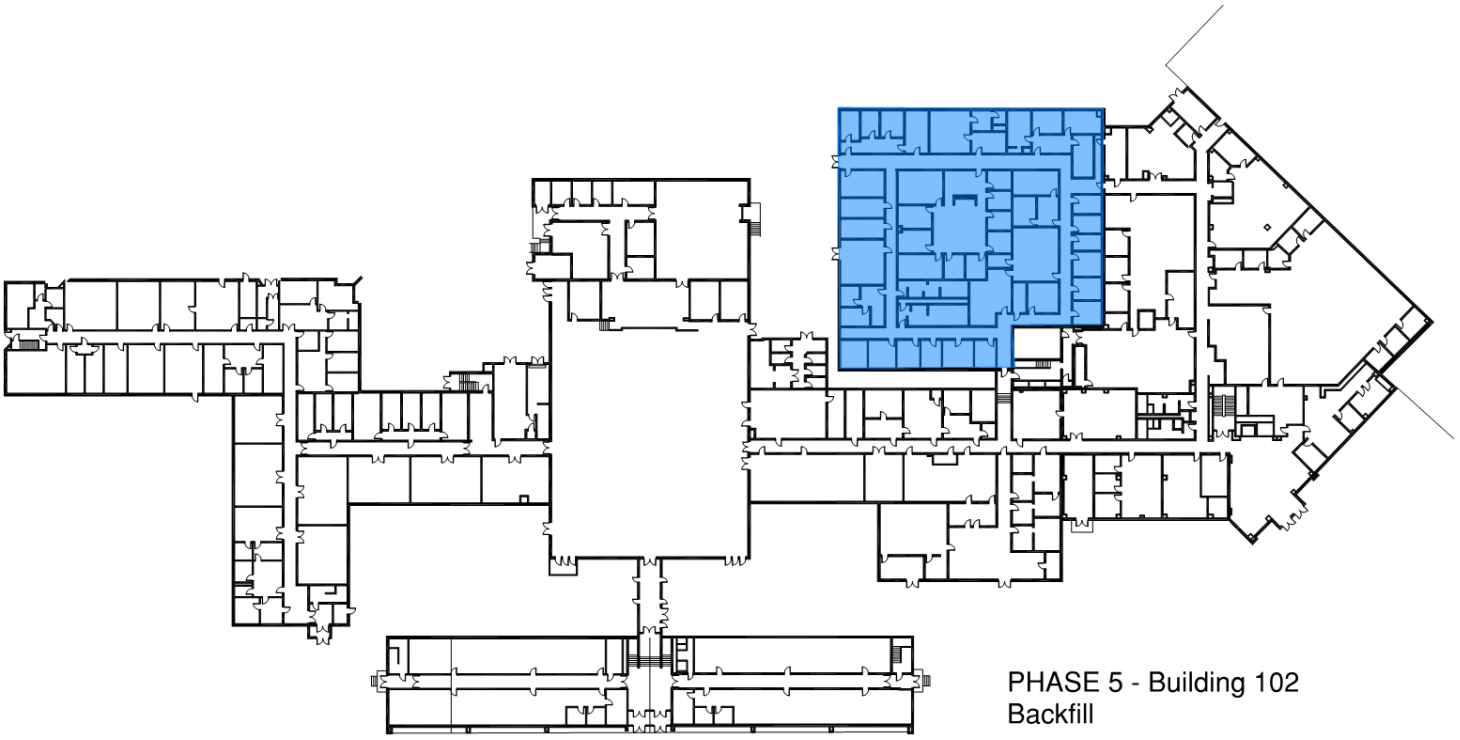
Phase 5- Backfill Renovations

The final phase of the work will be the backfill of all vacated areas upon the completion and occupancy of the new addition. The following areas will be available for backfill:

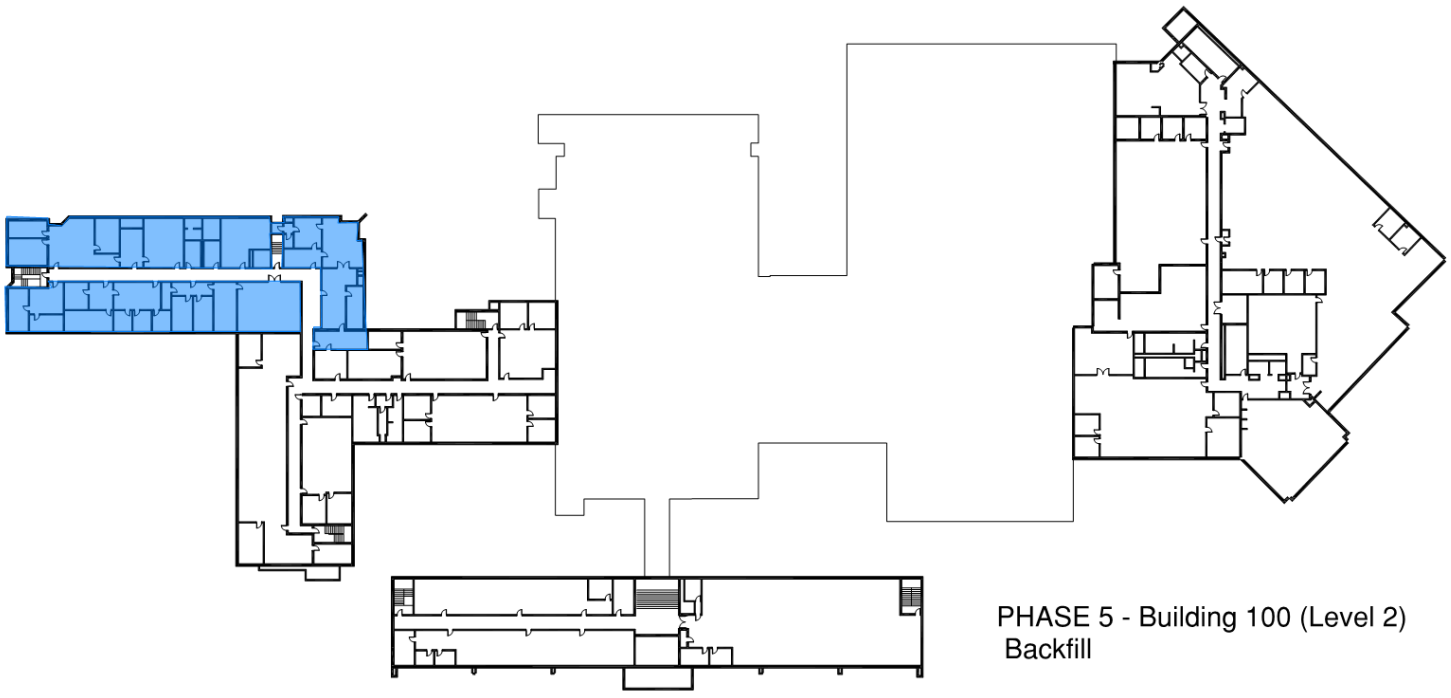
- Former EOC basement space – Building 102
- Basement office space
- Former Administration Space Building 102
- Former location of Air Guard 2nd Floor of Building 100



PHASE 5 - Basement Backfill

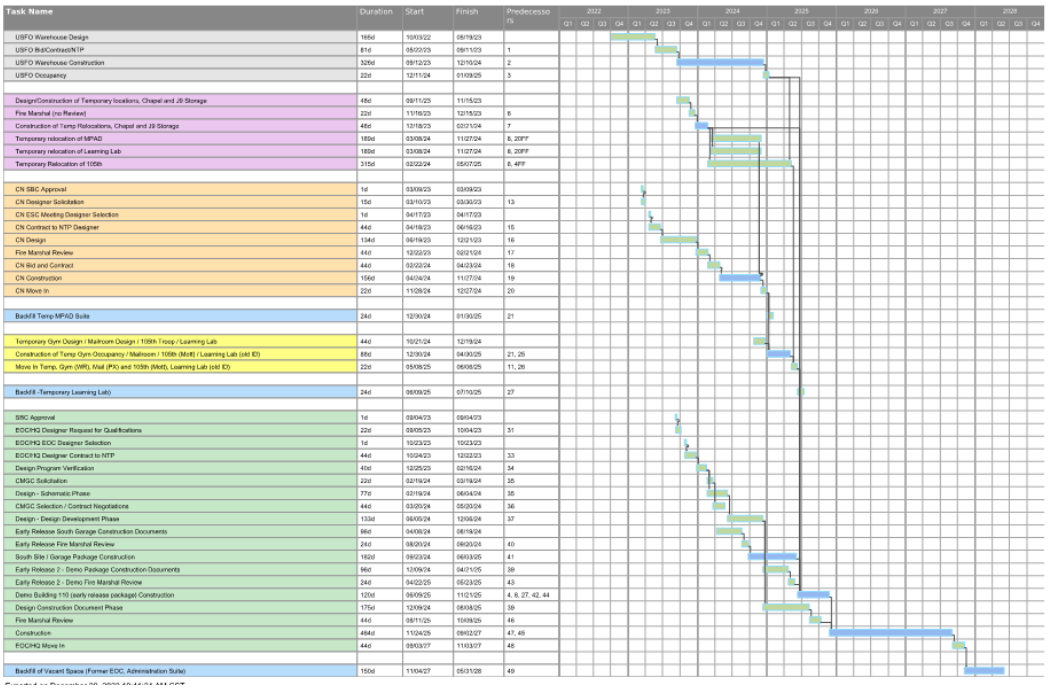


PHASE 5 - Building 102
Backfill



PHASE 5 - Building 100 (Level 2)
Backfill

Project Schedule



Task Name	Duration	Start	Finish	Predecessors
USFO Warehouse Design	165d	10/03/22	05/19/23	
USFO Bid/Contract/NTP	81d	05/22/23	09/11/23	1
USFO Warehouse Construction	326d	09/12/23	12/10/24	2
USFO Occupancy	22d	12/11/24	01/09/25	3
Design/Construction of Temporary locations, Chapel and J9 Storage	48d	09/11/23	11/15/23	
Fire Marshal (no Review)	22d	11/16/23	12/15/23	8
Construction of Temp Relocations, Chapel and J9 Storage	45d	12/18/23	02/21/24	7
Temporary relocation of MPAD	185d	03/08/24	11/27/24	6, 20FF
Temporary relocation of Learning Lab	185d	03/08/24	11/27/24	6, 20FF
Temporary Relocation of 105th	315d	02/22/24	05/07/25	6, 4FF
CN SBC Approval	1d	03/09/23	03/09/23	
CN Designer Solicitation	15d	03/10/23	03/30/23	13
CN ESC Meeting Designer Selection	1d	04/17/23	04/17/23	
CN Contract to NTP Designer	44d	04/18/23	06/16/23	15
CN Design	134d	06/19/23	12/21/23	16
Fire Marshal Review	44d	12/22/23	02/21/24	17
CN Bid and Contract	44d	02/22/24	04/23/24	18
CN Construction	156d	04/24/24	11/27/24	19
CN Move In	22d	11/28/24	12/27/24	20
Backfill Temp MPAD Suite	24d	12/30/24	01/30/25	21
Temporary Gym Design / Mailroom Design / 105th Troop / Learning Lab	44d	10/21/24	12/19/24	
Construction of Temp Gym Occupancy / Mailroom / 105th (Mott) / Learning Lab (old ID)	88d	12/30/24	04/30/25	21, 26
Move In Temp, Gym (WR), Mail (PX) and 105th (Mott), Learning Lab (old ID)	22d	05/08/25	06/06/25	11, 26
Backfill -Temporary Learning Lab)	24d	06/09/25	07/10/25	27
SBC Approval	1d	09/04/23	09/04/23	
EOC/HQ Designer Request for Qualifications	22d	09/05/23	10/04/23	31
EOC/HQ EOC Designer Selection	1d	10/23/23	10/23/23	
EOC/HQ Designer Contract to NTP	44d	10/24/23	12/22/23	33
Design Program Verification	40d	12/25/23	02/16/24	34
CMGC Solicitation	22d	02/19/24	03/19/24	35
Design - Schematic Phase	77d	02/19/24	06/04/24	35
CMGC Selection / Contract Negotiations	44d	03/20/24	05/20/24	36
Design - Design Development Phase	133d	06/05/24	12/06/24	37
Early Release South Garage Construction Documents	96d	04/08/24	08/19/24	
Early Release Fire Marshal Review	24d	08/20/24	09/23/24	40
South Site / Garage Package Construction	182d	09/23/24	06/03/25	41
Early Release 2 - Demo Package Construction Documents	96d	12/09/24	04/21/25	39
Early Release 2 - Demo Fire Marshal Review	24d	04/22/25	05/23/25	43
Demo Building 110 (early release package) Construction	120d	06/09/25	11/21/25	4, 8, 27, 42, 44
Design Construction Document Phase	175d	12/09/24	08/08/25	39
Fire Marshal Review	44d	08/11/25	10/09/25	46
Construction	484d	11/24/25	09/02/27	47, 48
EOC/HQ Move In	44d	09/03/27	11/03/27	48
Backfill of Vacant Space (Former EOC, Administration Suite)	150d	11/04/27	05/31/28	49

PROBABLE PROJECT BUDGET OVERVIEW

National Guard Headquarters Expansion (EOC)
1/20/2023

	As Programed 256,048 s.f.	
EOC Project	**State Funded**	**Federal Funded**
Building Construction	$125,020,557.00	
Building Demolition		$2,200,000.00
Site and Utilities	$6,905,367.09	
Structured Parking	$21,427,483.56	
Built in Equipment	$54,000,000.00	
Escalation	$16,588,272.61	$176,000.00
Bid Target	$223,941,680.26	$2,376,000.00
Contingency (10%)	$22,394,168.03	$237,600.00
MACC	**$246,335,848.29**	**$2,613,600.00**
Moveable Equipment	$6,000,000.00	$0.00
Design and Engineering Fees	$16,906,504.14	$217,087.16
Total Project II Cost	**$269,242,352.43**	**$2,830,687.16**
Supplemental Project Needs	Clement Nunally, Learning Lab, Temp Gym	
Building Construction	$4,109,320.90	
Site and Utilities	$408,910.85	
Structured Parking	$0.00	
Built in Equipment	$0.00	
Escalation	$0.00	
Bid Target	$4,518,231.75	
Contingency (10%)	$451,823.18	
MACC	**$4,970,054.93**	
Moveable Equipment	$0.00	
Design and Engineering Fees	$556,696.80	
Total Project I Cost	**$5,526,751.73**	
Subtotal	**$274,769,104.15**	**$2,830,687.16**
Total*	**$277,599,791.31**	

Section 2

Program Document

Project Package 1

Facility Renovations

Clement Nunally
Building 140
Building 150
Building 100- Learning Lab Suite

SBC 529/000-02-2019-01
Nashville, Davidson County, TN

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FRANKLIN, TENNESSEE

Project Overview

The Nashville Joint Forces Headquarters campus is preparing for larger construction project that will require the demolition of a portion of the larger National Guard Headquarters. That project will require various phases and to relocation of various departments, before that project can proceed with demolition. The renovation of the Clement Nunally facility is the first phase of work that will be required that will free up space that will be later be able to be used for relocation options during the larger project that is anticipated to begin in October of 2024.

Phase 1 - Clement Nunally Renovations

Phase 1 Overview

The Clement Nunally facility is an approximately 24,000 SF 2 story building located on the Joint Forces Headquarters Campus in Nashville which houses multiple Divisions of the National Guard forces. The facility was most recently renovated in 2017.

The functions that will be relocated into the Clement Nunally facility will be the public facing functions. This building was chosen as the ideal location due to its proximity to the campus entrance. The goal of this project is to renovate the facility to accommodate public facing functions. These functions include War Records, the PX, a small recruiting office, ID Cards, and the J9 Unit. The J9 Unit serves Family Services and Solider Services. In addition, one MTOE Unit will be located on one of the wings on the upper level.

The scope of work identified includes the new loading dock and receiving area, additional parking to accommodate visitors including handicapped spaces, a new elevator, ADA improvements, and new office areas. New finishes, HVAC, electrical a plumbing to support the programs to be relocated into the facility are also included.

This Program Document is to provide the guidance and direction of the building renovations and further design development.

Project Conceptual Site

GMC

Facility Program

J9 Division – Family and Solider Support Services

Space	Type Space	Qty	NET SF	Total NET	Notes
Family Services (9 Staff Total)					
SFPD Office	Private Office	1	120	120	Accommodate multiple guest
FB Specialist	Cubicle	1	100	100	
RCEP	Private Office	1	120	120	Accommodate 1-2 guests
PFC	Private Office	1	120	120	Accommodate 1-2 guests
CYP	Shared Office	1	160	160	Accommodate 2 staff
SOS	Private Office	1	120	120	Accommodate 1-3 guests
LSFR	Private Office	1	120	120	Accommodate 1-3 guests
ESGR	Cubicle	1	100	100	
Soldier Services (total 21 Staff)					
Director Office	Private Office	1	225	225	
FP Specialist	Cubicle	1	100	100	
SARC	Private Office	1	120	120	
VAC	Private Office	1	120	120	
R3SP	Cubicle	1	100	100	
RCR	Cubicle	1	100	100	
SPC	Cubicle	1	100	100	
PC	Cubicle	1	100	100	
MRT	Cubicle	1	100	100	
PFC	Private Office	1	120	120	
One Source	Cubicle	1	100	100	
YARP	Sharded Office	1	240	240	Accommodate 3 staff
RCTAA	Cubicle	1	100	100	
MFS	Cubicle	1	100	100	
DPS	Cubicle	1	100	100	
Department Support					
Coffee Area	Open	1	60	60	Sink and accommodate coffee pot
Work Room	Open	1	80	80	Copier, Shredder, Supply Storage
File cabinets	Open	12	6	72	10 pull out, 2 lateral
Lockers	Open	5	5	25	
Pull out Files	Open	10	6	60	
Conference Room	Hard Wall	1	310	310	Accommodate 10 plus 15 side
Funeral Services Supply Storage	Hard Wall	1	400	400	500 s.f. to be located adjacent to Department in adjacent facility
Total Net				**3642**	
25% Dept Grossing				**911**	
Department Gross				**4553**	

War Records

Space	Type Space	Qty	NET SF	Total NET	Notes
Lobby	Private Office	1	200	200	Accommodate at least 4 guests
Reception	Cubicle	2	100	200	
Full Time Staff	Cubicle	1	100	100	
Unassigned Staff	Cubicle	1	100	100	
Director Office	Private Office	1	225	225	
Record Storage	Hard Wall	1	2310	2310	
Files	Open	30	6	180	Inside of Record Storage, 30 files
Copier	Open	1	12	12	
Coffee/Break	Open	1	100	100	
Total Net				**3468**	
25% Dept Grossing				**867**	
Department Gross				**4335**	

ID

Space	Type Space	Qty	NET SF	Total NET	Notes
Lobby	Open	10	15	150	Accommodate up to 10
Office	Hard Wall	1	120	120	
Total Net				**270**	
0% Dept Grossing				**0**	
Department Gross				**270**	

Recruiting

Space	Type Space	Qty	NET SF	Total NET	Notes
Office	Hard Wall	1	120	120	
Total Net				**120**	
0% Dept Grossing				**0**	
Department Gross				**120**	

PX

Space	Type Space	Qty	NET SF	Total NET	Notes
Sales Floor	Hard Wall	1	2000	2000	
Vendor Food	Open	1	150	150	
Check Out	Open	3	50	150	
Service Space	Hard Wall	1	100	100	
Office	Hard Wall	1	100	100	
Receiving/Stockroom	Hard Wall	1	1300	1300	
Refrigerator	Hard Wall	1	140	140	
Janitorial	Hard Wall	1	10	10	
Dining Patio					Exterior Patio for Dining
Total Net				**3950**	
10% Dept Grossing				**395**	
Department Gross				**4345**	

EXISTING CONDITIONS

Observation Summary

Site Visit September 2022

General Observations:
The Clement Nunally facility was most recently renovation was performed in 2017. The facility is in generally good condition and appears to be structural sound. The building is a concrete frame, and has CMU infill between the concrete structure to form corridor and exterior walls. Later additions used studs and gypsum board partitions to build out added offices in some areas. The roof appears to be in the middle of its life expectancy. The building brick façade and windows are in generally good condition. Lighting though out the facility has already been upgraded to new LED lighting.

Existing finishes are showing signs of wear. Some staining is present on ceiling tiles. Interior doors are in generally good repair, although existing door hardware is not ADA compliant. Restrooms are not fully ADA compliant due to lack of required clearances around doors, and or non-compliant clearances around toilet rooms.

Code Differences:

- ADA clearance at toilet fixtures
- ADA clearances at some existing doors
- Stair handrails in egress stairwells do not meet current code requirements

Environmental Deficiencies:

- None known

Other Deficiencies:

General

- Facility does not have adjacent parking if to be used for public serving departments
- Building does not have handicapped parking
- The building has a lift, but does not have an elevator

Division 21 – Fire Sprinkler

- The building Fire Sprinkler system is currently served from the campus fire pump loop system with a 6" fire main pipe being routed to the building in the underground tunnel from the main gym area.
- The building is served primarily with a wet sprinkler system and utilizing semi-recessed quick response sprinkler heads.

Division 22 – Plumbing

- The building domestic cold water system is served from the campus domestic water pumped system via a 2" cold water main that is routed to the building in the underground tunnel from the mechanical room in the adjacent gym area.
- Domestic Hot Water for the building is served by two (2) hot water loops that serve each stacked set of the restrooms for the 1st and 2nd Floors. An electrical 40-gallon 6kW storage type water heater serves one set of restroom sinks, and an Eemax electric instantaneous type water heater serves the other set of restroom sinks. Both water heaters are currently located in storage rooms in the 1st floor area that also serve as building telecom rooms, which is not recommended.
- Roof drainage is currently served by a gutter and downspout system which appears to be working properly and does not show signs of ponding on the roof currently.

Division 23 - Mechanical

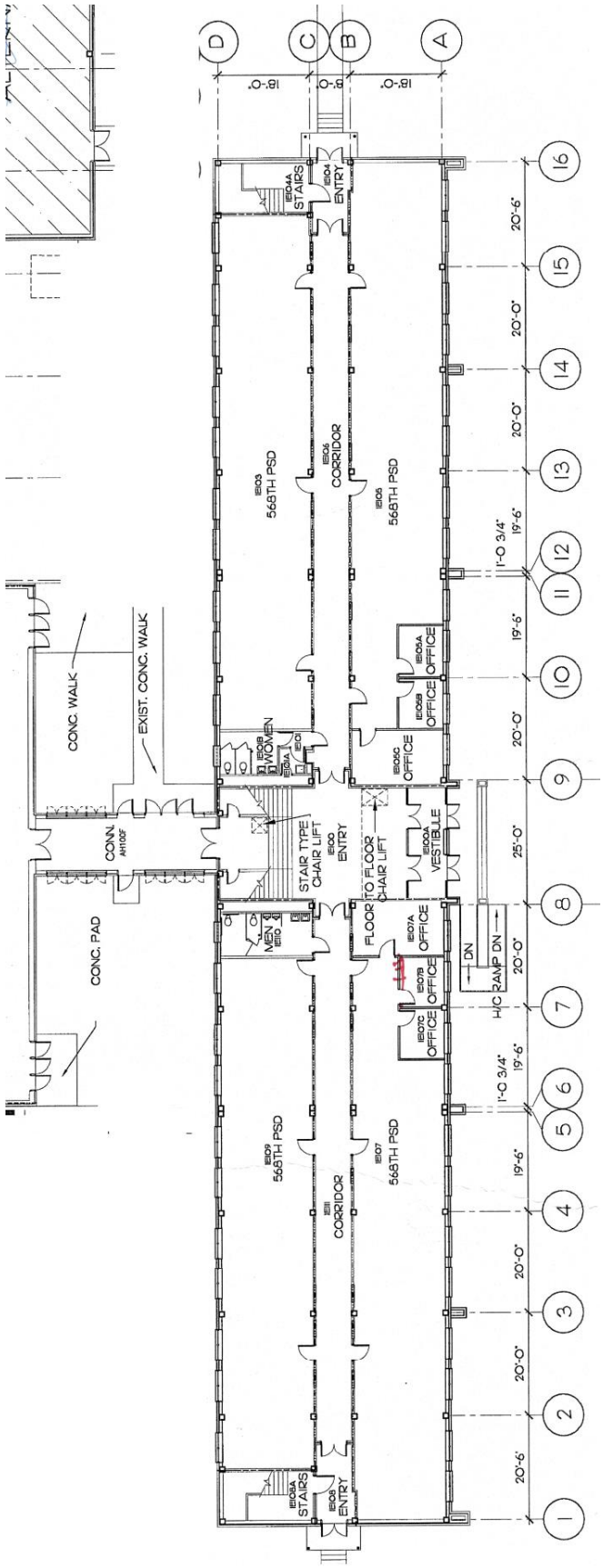
- The building HVAC system utilizes horizontal ducted water source heat pumps that utilize the campus water loop. 4" heat pump loop piping is routed underground through the courtyard to serve the building.
- The space is served by a mixture of horizontal ducted and under window vertical water source heat pumps that were installed in approximately 2008 and are reaching the end of their service life.
- The building outside air is served by two (2) roof mounted outside air units that each serve a half of the building. Currently the units are located too close to the edge of the building which creates a fall risk due to no hand rails. The units were installed in approximately 2008 and is reaching the end of its service life.

Division 26 - Electrical

- The Clement Nunally building is served by a 120/208 volt, three phase four-wire electrical service that is fed from a pad mounted utility transformer at the street. This transformer feeds an 800-amp main breaker 480-volt panel 'MDPA'. 'MDPA' distributes power to three (3) 400-amp branch panels.
- The first branch panel 'L1C' is located on the first floor and feeds all lighting and receptacle circuits on the first floor. The second branch panel 'L1CA' feeds all first floor heat pumps, electric heaters, and water heaters. The third branch panel 'L2C' feeds all second floor lighting, receptacles, heat pumps and both roof mounted outside air units.
- Lighting throughout the building appears to be original fluorescent type lamps. Exit signs locations appear to meet current code standards. Emergency egress lighting appears to be batteries installed in selected light fixtures and all exit signs. These batteries need to be verified if they are functioning and replaced if not functioning.

Division 28 – Fire Alarm and Low Voltage

- The building is provided with a Fire Alarm System that needs to be verified if it can be expanded or not. It is an existing Simplex 4100U control panel installed on the first floor egress corridor.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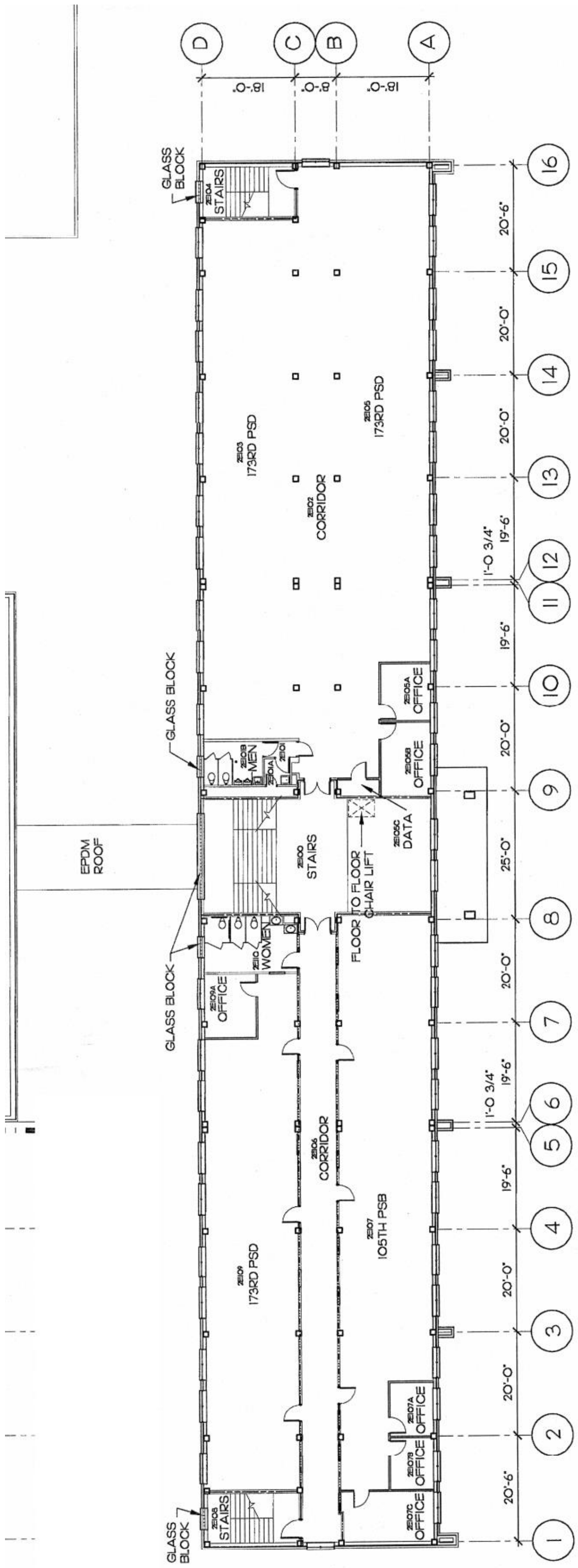
4
3
2
1
20'-6"
20'-0"
20'-0"
20'-0"
1'-0 3/4"
19'-6"
19'-6"
20'-0"
25'-0"
20'-0"
1'-0 3/4"
19'-6"
19'-6"
20'-0"
20'-0"
20'-6"
E104A STAIRS
E104 ENTRY
E103 568TH PSD
E106 CORRIDOR
E105 568TH PSD
E105A OFFICE
E105B OFFICE
E105C OFFICE
E108 WOMEN
E101
E100A VESTIBULE
CONC. WALK
EXIST. CONC. WALK
CONN. AH100F
STAIR TYPE CHAIR LIFT
E100 ENTRY
FLOOR TO FLOOR CHAIR LIFT
MEN E110
E107A OFFICE
E107B OFFICE
E107C OFFICE
DN
H/C RAMP DN
CONC. PAD
E109 568TH PSD
E111 CORRIDOR
E107 568TH PSD
E108A STAIRS
E108 ENTRY

GMC


GLASS BLOCK
STAIRS
173RD PSD
CORRIDOR
173RD PSD
OFFICE
OFFICE
MEN
STAIRS
DATA
FLOOR TO FLOOR CHAIR LIFT
WOMEN
OFFICE
EPDM ROOF
GLASS BLOCK
CORRIDOR
173RD PSD
105TH PSB
OFFICE
OFFICE
OFFICE
STAIRS
GLASS BLOCK
18'-0"
8'-0"
18'-0"
20'-6"
20'-0"
20'-0"
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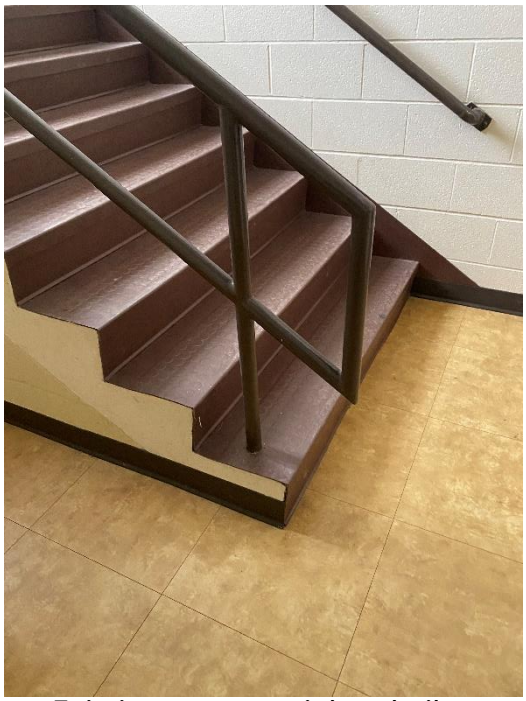
1'-0 3/4"
19'-6"
20'-0"
25'-0"
20'-0"
19'-6"
1'-0 3/4"
19'-6"
20'-0"
20'-0"
20'-6"

Existing entrance

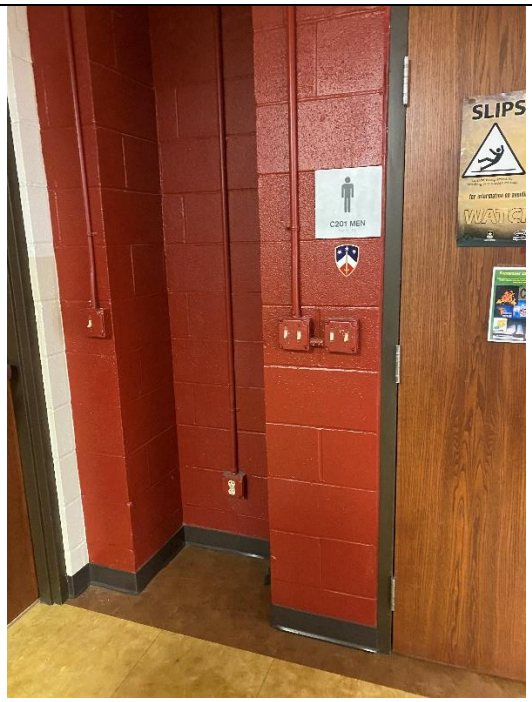
Existing entrance

Existing Lift @ lobby

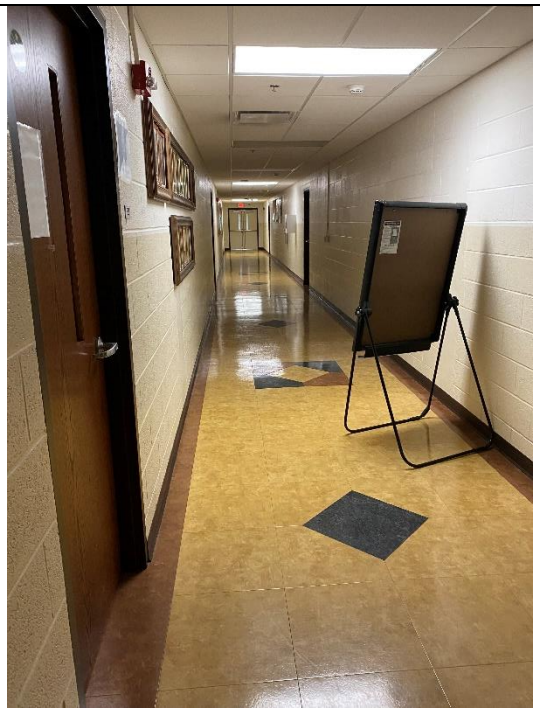
Existing Lobby



Existing egress stair handrails



Existing finishes



Existing corridor

Existing War Records facility

RECOMMENDED SOLUTIONS

The following is a brief list of items that need to be addressed for the Building Upgrades of the building to accommodate the new proposed usage for the building to include PX, War Records, MTOE unit offices, and J9 unit offices. These assumptions are the basis of the provided probable costs.

Division 1 – General Requirements

- The project will require ID Check upon entry for workers
- Material Testing of new concrete will be required.
- Basic commissioning of engineered systems to be included.

Division 2 – Existing Conditions

- Minor slab demolition will be required to accommodate new elevator pit.
- Minor demolition in existing restrooms is required for new restroom configurations to meet ADA
- Demolition of existing floor finishes, and
- Selective areas of ceiling demolition will be required to accommodate areas of that will now have exposed ceilings (War Record File area) and areas required to be demolished to accommodate new mechanical work above ceilings.
- Selective demolition of existing doors and walls are anticipated.
- Demolition of existing lift included. Existing lift may be left in place during construction for assistance of movement of materials during early stages of construction.

Division 4 – Masonry

- The building renovation will require some patch and repair and/or extension of existing CMU masonry walls.
- Patch brick veneer to match existing where one entry door is removed.

Division 5 – Metals

- Repair existing handrails in egress stairs to meet current code requirements and repair and/or extension of existing CMU masonry walls.

Division 6 – Wood Plastics and Composites

- New stick framed picnic pavilion at new patio

Division 7 – Thermal and Moisture Protection

- Asphalt shingle roof at new picnic pavilion
- Due to the amount of roof work to accommodate new HVAC units, a new white EPDM roof replacement is recommended

Division 8 – Openings

- New exterior storefront to new patio area.
- Provide new hollow metal exterior egress door from egress stairwell to new PX loading dock.
- Replace existing 5'-0' wide metal doors at Funeral Storage with new set of hollow metal doors with no lites.
- New door to War Record Storage area to be hollow metal.
- Provide new storefront doors and windows at corridor entrances into the new .Recruitment office and to Waiting Area of new ID office.
- All other new interior doors to be wood stained to match existing
- Provide new roll up gate at PX entrance.

Division 9 – Finishes

- Walls – new walls to be Gypsum on metal studs
    - All interior walls to receive new paint finish
    - Restrooms: Ceramic tile to Wainscot
- Floors
    - War Records storage: Sealed Concrete, Rubber Base
    - Funeral Storage: VCT, Vinyl Base
    - Office Areas: Carpet, Vinyl Base
    - Corridors: VCT , Vinyl Base
    - PX: VCT , Vinyl Base
    - Lobby: VCT, vinyl Base
    - Restrooms: Ceramic Tile

- **Ceilings**
    - Ceilings to remain. Patch and repair existing as required for new above ceiling work.

Division 10 – Specialties

- Provide new toilet partitions at reworked bathrooms
- Provide new toilet accessories at reworked bathroom stalls

Division 11 – Equipment

- Provide new refrigerator in J9 coffee area and War Records Area.
- Provide new dock leveler and bumpers at PX dock
- PX Equipment to be provided by others (Equipment sheets are included in this report as a design guideline and for reference only for planning purposes)

Division 14 – Conveying Equipment

- Provide new dock lift at PX dock.
- Provide new passenger elevator at lobby that meets ADA.

Division 21 – Fire Sprinkler

- The building renovation areas will require that all sprinkler heads be reworked as required to accommodate the new ceiling and wall lay-outs.
- The new War Records area will be provided with a new FM200 Clean Agent sprinkler system. All existing wet sprinkler piping and heads will be removed and capped out side of the area with the new FM 200 system serving the space only.

Division 22 – Plumbing

- With the rework of the bathrooms for ADA compliance, the domestic cold and hot water systems will be reworked accordingly. Domestic cold water piping shall be reworked as necessary for the new fixture locations.
- The Domestic hot water systems will be combined and a new electric 40-gallon 6-kW water heater will be provided to serve all restroom and janitors sinks. The new water heater will be relocated to the new closet in the under-stair storage room to separate it from the Telecomm equipment. New domestic hot water piping shall be routed from the new hot water heater location to the new sink locations. A new domestic hot water return loop and associated recirc pump will be provided as well to accommodate the increase in pipe length.
- As part of the Elevator, a new 50 gal/min oil sensing elevator sump pump will be provided.

Division 23 – Mechanical

- The building water source heat pump systems and associated outside air systems shall be renovated to accommodate the new architectural lay-out and space requirements.
- New water source heat pumps will be provided for 1st Floor PX and the 2nd Floor J9 Unit renovation areas. All interior open office spaces will utilize existing ducted heat pump units where possible while exterior private offices will be provided with under window vertical units and reusing existing where possible.
- The building outside air units will be replaced and will be relocated to maintain a minimum of 10ft working clearance from the edge of the roof. Two (2) new 2,200 cfm 100% outside air rooftop units and associated ductwork will be installed as part of the project. The units will have natural gas preheat, DX cooling, hot gas reheat, and shall be supplied with MERV 13 filters.
- Two (2) new 2,000-cfm exhaust fans and associated duct systems will be provided in place of the existing fans and new ductwork will be routed to serve the restrooms and associated spaces.
- The War Records space will require a different system than is to be provided in the remainder of the building. To accommodate the Archival space requirements, three (3) 3-ton horizontal ducted split system computer room units, similar to Liebert Mini-Mate2 model, shall serve the space. The CRAC units will be provided with DX cooling, infrared humidifier, and electric SCR reheat. The condensing units for the CRAC indoor units shall be located on the 2nd Floor roof above. Diffusers for the space shall be HEPA filtered laminar flow type to accommodate the space filtration requirements. A separate space gas phase filtration system shall be provided as well to recirculate air in the space.

Division 26 – Electrical

- Provide new LED 2x4 lighting troffers on the first floor in the renovated PX and War Records spaces. Provide integral batteries in selected troffers to meet code required egress lighting requirements. Provide new LED exit signs at all new egress doors.
- Provide new LED 2x4 lighting troffers on the second floor in the renovated J9 space. Provide integral batteries in selected fixtures to meet code required egress lighting requirements and provide new exit signs at all egress doors in the renovated J9 space. Provide replacement LED lighting fixtures for all remaining existing fixtures on the second floor.
- Provide lighting controls to meet 2018 IECC requirements in all renovated spaces.
- The PX space will require new branch circuits for "sandwich shop" type equipment. New breakers in existing panel 'L1C' will be added to serve this equipment. The War Records space will require new convenience receptacles and branch circuits.
- The renovated J9 space will require new convenience receptacles and branch circuits. Spare breakers in existing panel 'L2C' will be used to feed these new branch circuits.
- The existing HVAC will be relocated in the PX space but will be replaced in War Records. Also, the two existing outside air units will be replaced on the roof. The intent is to re-use existing branch circuits for this HVAC equipment replacement.
- As part of the Elevator Modernization, the existing elevator shaft will be upgraded with new receptacles for the sump pumps that is to be located above the floor line, and new LED strip lighting. The associated elevator machine room will be provided with new LED lighting and the new elevator motor will be provided with new disconnect.

Division 28 – Fire Alarm and Security

- Relocate existing initiating and visual devices to meet the new space requirements. New visual devices will be added in the existing restrooms.
- As part of the Elevator Modernization, the elevator shaft and machine room will be provided with new smoke detection and heat detection as required for the space condition.

Division 31 – Earthwork

- Earthwork included for grading of new parking areas, driving and loading area.

Division 32 – Exterior Improvements

- Provide new exterior concrete patio area
- Provide new exterior ADA ramp and stairs to patio
- Provide new drive, parking and retaining walls

Phase 2 Mailroom Relocation and Temporary Gym and Learning Lab Build Out

Project Overview

This project shall include the following areas:

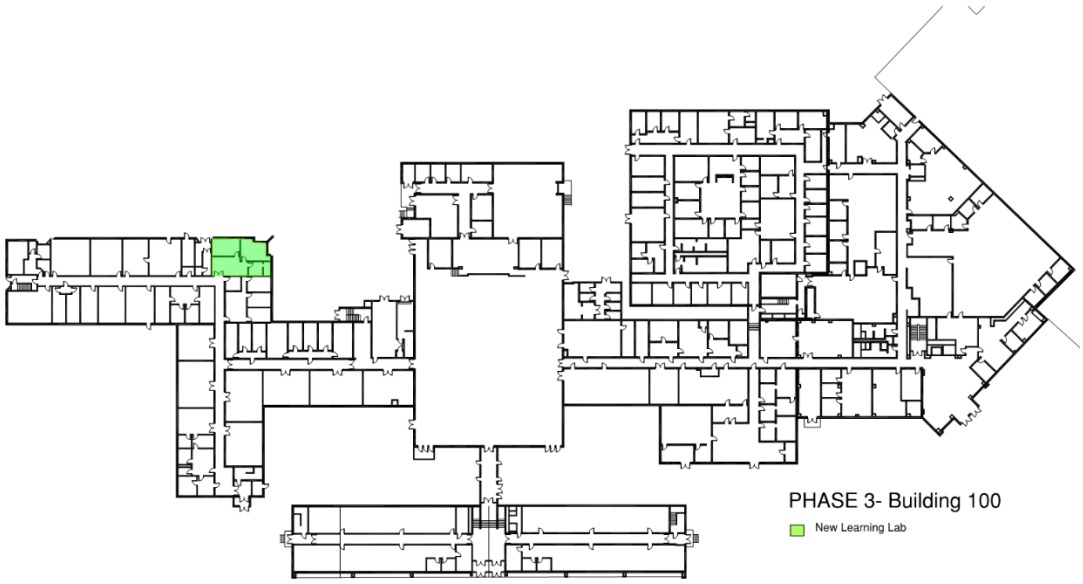
- Relocation of the learning lab from temporary location to it's permanent location in Building 100.
- Relocation of the 105th TC to its permanent location on the 2nd Floor of the Mott Building
- Build out of a Temporary Gym space in the former War Records facility
- Buildout of a new Mailroom in the former PX location

Learning Lab

Relocation of the Learning Lab from it's temporary location to it's permanent location of the former ID Center in Building 100. Minor construction to be includes: Removing of all internal walls in the area

RECOMMENDED SOLUTIONS – Learning Lab

- New work shall include:
    - Remove all interior walls in space
    - Provide new finishes in space
    - Add additional outlets and data as required



Division 22 – Plumbing

- No New Work is occurring in this project.

Division 23 – Mechanical

- Relocate existing diffusers as required to accommodate new ceiling lay-out.

Division 26 – Electrical

- The new Learning Lab will re-use the existing lighting fixtures and exit signs. Existing fixtures will be relocated as necessary for the new space layout.
- Provide new lighting controls to meet 2018 IECC requirements in all renovated spaces.
- The existing receptacle circuitry in the space will be reconfigured to accommodate the new furniture lay-out.

Design Criteria:

- Lighting And Branch Circuit Panelboards
  - 208Y/120V panelboards will be Square D type "NQOD".
  - Provide with copper bus.
  - Typed directories will be provided in each panelboard.
  - Main breakers will be provided where required by code.
  - A minimum of 10% spare circuit breakers will be provided in each panelboard.
- Cables, Wiring And Raceways
  - Cable and wiring will be copper conductors, color coded, and with 75°C rated insulation.
    - Aluminum conductors sizes #2AWG and larger can be provided as deduct alternate. Provide alternate pricing.
  - Lighting and receptacle branch circuit conductors #10AWG and smaller will be solid copper, type "THW", "THWN" or "THHN". Minimum size will be #12AWG, except for control wiring, which may be #14AWG, type "THHN".
  - Conductors #8 AWG and larger will be stranded copper with "THW" or "XHHW" insulation.
  - Final wiring connections to light fixtures and motors will be run in flexible metal conduit. Liquid tight flexible conduit will be used in wet locations or where exposed to the weather. Final flexible connections to motors and other vibrating equipment will be required to be a minimum 2ft long and a maximum of 4ft long.
  - All wiring will be run in conduit. Minimum size conduit will be 1/2". A green-wire ground will be run in each conduit.
  - Raceways inside the building will be electrical metallic tubing with compression fittings.
  - Cable and conduit supports, couplings and fittings, pullboxes and other wiring materials and devices will be provided as required.
  - MC type cable will not be allowed. Hospital grade MC cable will be allowed for normal power fixture whips only.

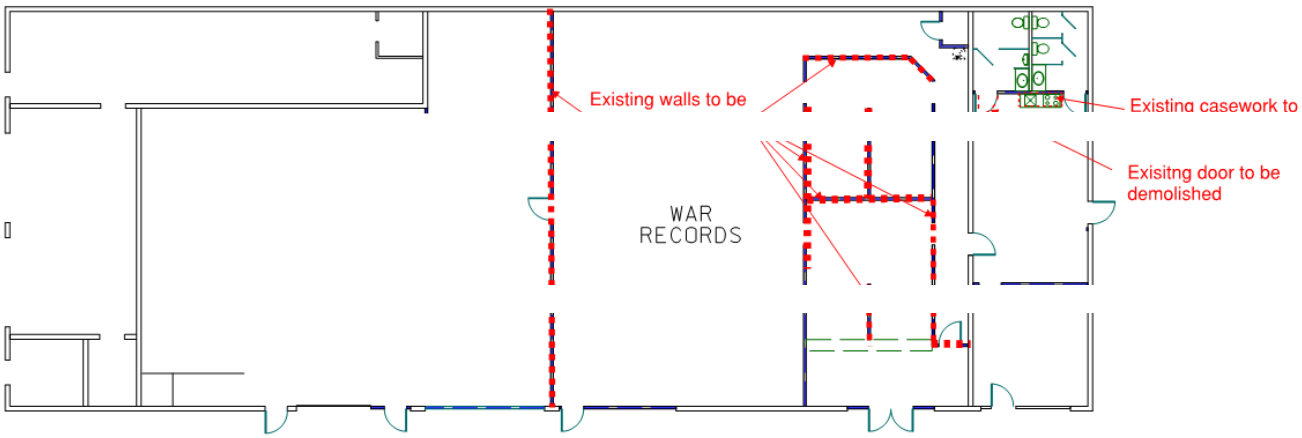
- Receptacles
    - Receptacles will be provided in each new space per program requirements. At a minimum, each regularly occupied space will have at least one receptacle per wall. In renovation areas, existing receptacles to remain and receptacles added as needed for new space/equipment requirements.
    - Receptacle quantity and locations will comply with FGI and end user requirements.
    - Receptacles for maintenance and special equipment will be provided as required by code.
    - Receptacles for general use will be 20A, heavy duty, grounding type. Pass & Seymour plug tail or similar. Hospital grade receptacles will be required in all patient care areas.
    - All receptacles in toilets, janitor closets and counter tops with sinks will be GFCI type.
    - Receptacles within pediatric areas and waiting rooms shall be tamper-resistant in accordance with AIA.
    - All receptacles in exterior locations will be in-use extra duty weatherproof with weather-resistant GFCI type receptacles.
    - Normal power devices will be white in color and devices served from an emergency power source will be red.
    - Cover plates for normal power wall devices will be white nylon. Cover plates for emergency power wall devices will be red nylon. All plates for multiple gang requirements will be one-piece combination. All device cover plates shall be labeled with the associated panelboard and circuit identification.
    - Mounting heights will be per ADA requirements
    - Floor Boxes and Poke-throughs
        - Floor boxes will be flush mounted.
        - Floor service fittings will be combination type (duplex receptacle and telephone service), back-to-back design, extruded aluminum.
- Grounding
    - All lighting and branch circuit panelboards will be grounded per the NEC.
    - A separate green ground wire will be included in each circuit raceway.
    - A double ground path will be used in all patient areas.
- Mechanical Equipment Connections
    - Electrical power connections will be made to all mechanical equipment, plumbing, and fire protection equipment; including furnishing of all electrically associated devices such as disconnect switches, contactors, magnetic or manual starters, lock-out switches, etc., which are not furnished under the Mechanical, Plumbing or Fire Protection sections.

- Starters And Controls
    - All temperature control and mechanical equipment interlock wiring, raceways and associated devices will be provided per the Temperature Control System section. Refer to controls section for more information. All alarms, plumbing and fire protection control and equipment interlock wiring, raceways and associated devices will be provided per this section. All fire detection, alarm and communications wiring, raceways and associated devices will be provided per this section.
    - Magnetic starters will be combination type complete with fusible switch, auxiliary contacts, overload relays, individual fused control transformer, hand-off-automatic selector switch or start-stop push button, and pilot lights.
    - Reduced voltage starters will be provided for motors 75 horsepower and larger.
- Lightning And Surge Protection
    - A lightning protection system will be included for the new building addition. The system will connect to the existing building system as required for a UL Master Label certification.
    - Additional levels of SPD will also be provided at panelboards serving loads that are susceptible to transient surges. All life safety panelboards will have SPD protection.
- General Provisions For Communication Systems
    - Line voltage receptacles and power connections will be provided as required in telecom rooms to facilitate power to the equipment in the system racks.
    - A ground bar will be provided in new telecom room for the equipment systems.

Temporary Gymnasium

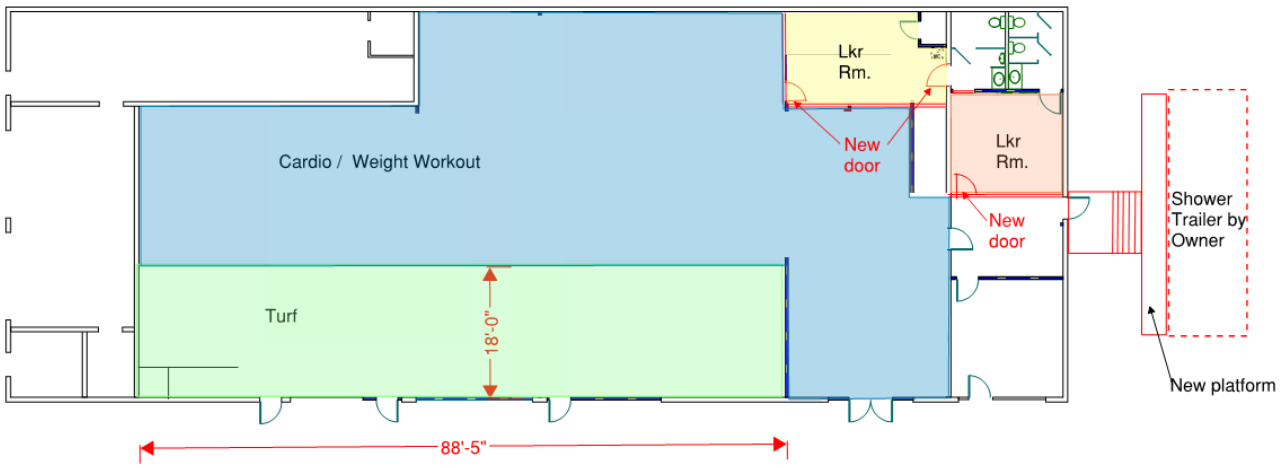
Once the War Records facility is relocated to its new location in the Clement Nunally facility, the space can be utilized for a new gymnasium facility in the interim until the new addition in complete at the headquarters facility where the gymnasium will be permanently housed. As a temporary location, it is the intent to minimize the amount of work to be done with the space to accommodate the fitness functions. Rubber mat flooring, lockers and existing equipment will be relocated from the existing gym for reuse in the temporary location.

- New work shall include:
    - A turf area will be included that should be 25' wide and at least 100' long.
    - New enclosed locker rooms with direct access to a restroom (existing restrooms to be reused in existing location)
    - The National Guard shall provide an existing shower trailer that can be used while the temporary gym is needed. The trailer will sit alongside of the facility, and will require water to be brought to the trailer. In addition, a stick framed stair and platform will be required to be constructed to the shower doors. The platform does not need to be enclosed.



BUILDING 150

Existing Facility / Required Demo



BUILDING 150

Conceptual New Gymnasium layout

EXISTING CONDITIONS – TEMPORARY GYMNASIUM

Division 21 – Fire Sprinkler

Building 150 – Existing War Records

- The building does not currently have a sprinkler system.

Division 22 – Plumbing

Building 150 – Existing War Records

- The building domestic cold water system is served from the municipal domestic water main via a 1-1/2" cold water main that is routed to the building and enters in the bathroom.
- Domestic Hot Water for the building is served via a tank type electric water heater that is located in an adjacent mechanical room.
- Roof drainage is currently served by a gutter and downspout system which appears to be working properly and does not show signs of ponding on the roof currently.

Division 23 - Mechanical

Building 150 – Existing War Records

- The building HVAC system utilizes a mixture of thru-wall AC units, split system AC units, and packaged AC units. All units are reaching the end of their service life and are single zone units only.

Division 26 - Electrical

Building 150 – Existing War Records

- The building is currently served by a 120/240-volt, single phase three-wire electrical service that is fed from a pole mounted utility transformer at the street. This transformer feeds a 600-amp main disconnect that distributes power to two (2) 200-amp branch panels.
- Branch panels 'A' and 'B' are in the renovation area and feed all lighting and receptacle circuits in the building renovation area.
- Lighting throughout the building appears to be original fluorescent type lamps. Exit signs locations appear to meet current code standards. Emergency egress lighting appears to be batteries installed in selected light fixtures and all exit signs. These batteries need to be verified if they are functioning and replaced if not functioning.

Division 28 – Fire Alarm and Low Voltage

Building 150 – Existing War Records

- The building is provided with a Fire Alarm System that needs to be verified if it can be expanded or not. It is an existing Honeywell control panel.

RECOMMENDED SOLUTIONS – TEMPORARY GYMNASIUM

The following is brief list of items that need to be addressed for the necessary building upgrades to accommodate the new proposed usage. These assumptions are the basis of the provided probable costs.

Division 1 – General Requirements

- The project will require card access or key pad code for workers to enter the building.

Division 2 – Existing Conditions

- Gym: Demolition of existing floor finishes, and select ceiling finishes.
- Selective demolition of existing doors and walls are anticipated.

Division 5 – Metals

- Handrails at platform

Division 6 – Wood Plastics and Composites

- New stick framed platform and stairs to access shower trailer

Division 7 – Thermal and Moisture Protection

- None

Division 8 – Openings

- None

Division 9 – Finishes

- Walls – new walls to be Gypsum on metal studs
    - All interior walls to receive new paint finish
- Floors
    - Gym: Sealed Concrete, Vinyl Base in workout areas and locker rooms.
    - Rubber Mats at Weight Area (existing to be relocated).
- Ceilings
    - Gym: Patch and repair existing as required.
    - Gym Locker rooms to receive new 2x2 lay in ceiling.

Division 10 – Specialties

- None

Division 11 – Equipment

- None

Division 14 – Conveying Equipment

- None

Division 22 – Plumbing

Building 150 – Temporary Gymnasium

- With the rework of the bathrooms to increase counts and provide new locker room, the domestic cold and hot water systems will be reworked accordingly. Domestic cold water piping shall be reworked as necessary for the new fixture locations.
- The Domestic hot water systems will be provided with a new electric 40-gallon 6-kW water heater that will located in the adjacent janitor closet. New domestic hot water piping shall be routed from the new hot water heater location to the new sink locations. A new domestic hot water return loop and associated recirc pump will be provided as well to accommodate the increase in pipe length.
- For the temporary Shower Trailer, a new 2" domestic water service with new meter and tap shall be provided from the street water connection. The piping shall be valved and capped near the proposed location and provided with heat tracing above grade.

Division 23 – Mechanical

Building 150 – Temporary Gymnasium

- The building existing HVAC system will be modified to accommodate the new space lay-out.
    - The existing Rheem packaged DX AC Unit with gas heater located outside by the front roll-up doors will remain as is and the existing supply and return ductwork will be reworked to serve the new Turf area.
    - The existing PTAC and Bard wall unit shall be removed from the building. The existing Carrier packaged DX AC Unit currently located at the new Shower Trailer entry will be relocated closer to the road. The unit shall be provided with new ductwork and grilles/diffusers to serve the new Locker Rooms and corridor.
    - A new packaged DX AC Unit with gas heat shall be provided adjacent to the existing Rheem unit to serve the Gym space. New supply and return ductwork shall be routed to serve the Gym with new diffusers and grilles.
    - Two (2) new 1,000-cfm exhaust fans and associated duct system will be provided to serve the renovated restrooms, locker rooms, and Gym spaces.

Division 26 – Electrical

Building 150 – Temporary Gymnasium

- The new Temporary Gym building will re-use the existing light fixtures and exit signs except as noted. In the gym space that requires high ceilings, replace the light fixtures with new LED high-bay type fixtures.
- Provide lighting controls to meet 2018 IECC requirements in all renovated spaces.
- The existing HVAC will be modified as described above. One of the existing AC units will remain in place. A second AC unit will be relocated. Relocate the existing disconnect switch and extend the existing branch circuit. Two of the existing AC units will be removed. Remove the existing branch circuit wiring back to existing panel A.
- A new AC unit will be added to serve the new gym space. Power this new unit from existing panel A. Add a new 2-pole breaker, amperage per manufacturer's recommendation, and provide new branch circuit and disconnect switch.
- Power the two new exhaust fans from existing panel A and add two new 15-amp, 1-pole breakers. Provide new branch circuitry to each new fan.
- For the temporary Shower Trailer, a new overhead electrical service and meter will be installed from the existing utility pole. Assumed to be 100-amps, single-phase at 120/240-volts.

Division 28 – Fire Alarm and Security

Building 150 – Temporary Gymnasium

- Relocate existing initiating and visual devices to meet the new space requirements. New visual devices will be added in the locker rooms.

Division 31 – Earthwork

- None

Division 32 – Exterior Improvements

- None

EXISTING CONDITIONS - MAILROOM

Division 21 – Fire Sprinkler

Building 140 – Existing PX

- The building does not currently have a sprinkler system.

Division 22 – Plumbing

Building 140 – Existing PX

- The building domestic cold water system is served from the municipal domestic water main via a 1-1/2" cold water main that is routed to the building and enters in the bathroom.
- Domestic Hot Water for the building is served via a tank type electric water heater that is located in an adjacent mechanical room.
- Roof drainage is currently served by a gutter and downspout system which appears to be working properly and does not show signs of ponding on the roof currently.

Division 23 - Mechanical

Building 140 – Existing PX

- The building HVAC system is served by two (2) packaged AC units. All units are reaching the end of their service life and are single zone units only.

Division 26 - Electrical

Building 140 – Existing PX

- The building is currently served by a 120/240-volt, single-phase three-wire electrical service that is fed from a pole mounted utility transformer at the street. This transformer feeds an exterior mounted 400-amp main disconnect that distributes power to multiple indoor branch panels.
- Branch panel 'NLAB' is a two-section, 225 amp rated panel, located in the renovation area and feeds all lighting and receptacle circuits in the building. Branch panel 'B' is a 100-amp load center panel in the renovation area that serves the AC units and cooler.
- Lighting throughout the building appears to be original fluorescent type lamps. Exit signs locations appear to meet current code standards. Emergency egress lighting appears to be batteries installed in selected light fixtures and all exit signs. These batteries need to be verified if they are functioning and replaced if not functioning.

Division 28 – Fire Alarm and Low Voltage

Building 140 – Existing PX

- The building is currently not provided with a Fire Alarm system.

RECOMMENDED SOLUTIONS – Mailroom

Division 22 – Plumbing

Building 140 – New Mailroom

- With the rework of the bathrooms for ADA compliance, the domestic cold and hot water systems will be reworked accordingly. Domestic cold water piping shall be reworked as necessary for the new fixture locations.

Division 23 – Mechanical

Building 140 – New Mailroom

- The new Mailroom building will be served from the existing packaged DX AC Units currently located outside the building. The existing supply and return ductwork will be rerouted as necessary to accommodate the revised space lay-out. New supply and return diffusers/grilles shall be provided in the spaces.
- A new 1,000-cfm exhaust fan and associated duct system will be provided to serve the renovated restrooms and associated spaces.

Division 26 – Electrical

Building 140 – New Mailroom

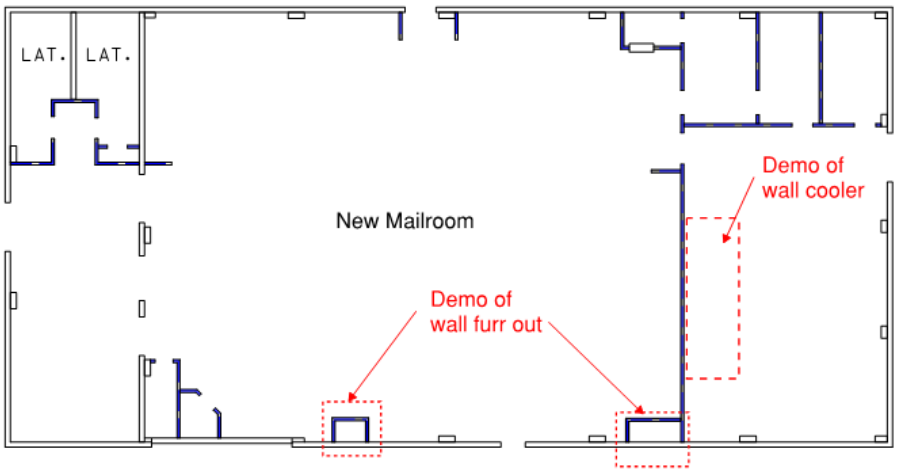
- The new Mailroom building will re-use the existing lighting fixtures and exit signs. Relocate fixtures as necessary for the new space layout.
- Provide lighting controls to meet 2018 IECC requirements in all renovated spaces.
- The existing HVAC will be re-used for the new space layout. The new exhaust fan will be circuited to the existing AC panel and a new 15-amp, 1-pole circuit breaker.

Division 28 – Fire Alarm and Security

Building 140 – New Mailroom

- The new space does not require a fire alarm system per code.

Conceptual Mailroom layout



Current Code Requirements:

International Building Code (IBC), 2012 edition
International Fuel Gas Code (IFGC), 2012 edition
International Mechanical Code (IMC), 2012 edition
International Plumbing Code (IPC), 2012 edition
International Energy Conservation Code (IECC), 2012 edition
International Existing Building Code (IEBC), 2012 edition
NFPA 101 Life Safety Code, 2012 edition
National Electrical Code (NEC), 2017 edition
2010 ADA Standards

Anticipated Design and Construction Schedule

Design Schedule

Program Verification	30 days
Schematic Design	45 days
Design Development	45 days
Construction Documents	60 days
Fire Marshal Review	60 days
Bid and Negotiation	60 days

Construction Schedule

Target Construction Start: April 25, 2024
Active Construction: 6 months (Phase 1); 3 months (Phase 2)
Target Completion: April 8, 2025

STATEMENT OF PROBABLE COST

Project 1

Facility Renovations

Clement Nunally
Building 140
Building 150
Building 100- Learning Lab Suite

The presented costs represent construction costs only and do not include Furnishing, Fixtures and Equipment. No known environmental concerns are known at this time and this statement does not include an allowance for any unforeseen mitigation.

Attachment A

Opinion of Probable Cost 1/9/2022

		24000		8000		750	
		Clement Nunally		Temporary Gym		Learning Lab	
Divisional Breakdown							
Division	**Description**	**Cost per GSF**	**Budget Amount**	**Cost per**	**Budget Amount**	**Cost per GSF**	**Budget Amount**
1	General Requirements	$0.00		$0.00		$0.00	
2	Existing Conditions	$5.92	$142,191.83	$1.89	$15,093.83	$9.46	$7,095.00
3	Concrete	$0.04	$984.00	$0.06	$492.00	$0.00	$0.00
4	Masonry	$0.08	$1,926.64	$0.00	$0.00	$0.00	$0.00
5	Metals	$0.81	$19,466.60	$0.00	$0.00	$0.00	$0.00
6	Woods, Plastics, & Composites	$0.26	$6,252.20	$0.55	$4,393.50	$0.00	$0.00
7	Thermal and Moisture Protection	$2.34	$56,248.00	$0.03	$250.00	$0.00	$0.00
8	Openings	$2.49	$59,747.50	$1.09	$8,715.00	$0.00	$0.00
9	Finishes	$10.05	$241,119.75	$5.61	$44,917.48	$17.38	$13,033.50
10	Specialties	$0.31	$7,422.85	$0.00	$0.00	$0.00	$0.00
11	Equipment	$0.03	$800.00	$0.00	$0.00	$0.00	$0.00
12	Furnishings	$0.37	$8,900.00	$0.00	$0.00	$0.00	$0.00
13	Special Construction	$0.37	$8,900.00	$0.00	$0.00	$0.00	$0.00
14	Conveying Equipment	$7.50	$180,000.00	$0.00	$0.00	$0.00	$0.00
21	Fire Suppression	$3.00	$72,000.00	$0.00	$0.00	$2.40	$1,800.00
22	Plumbing	$8.75	$210,000.00	$4.35	$34,800.00	$0.00	$0.00
23	HVAC	$40.30	$967,250.00	$23.06	$184,500.00	$16.67	$12,500.00
26	Electrical and Communications	$15.20	$364,800.00	$26.16	$209,250.00	$21.00	$15,750.00
27	Communications	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
28	Electronic Safety & Security	$3.30	$79,200.00	$2.81	$22,500.00	$0.00	$0.00
31	Earthwork	$1.98	$47,500.00	$0.00	$0.00	$0.00	$0.00
32	Exterior Improvements	$11.55	$277,300.00	$0.00	$0.00	$0.00	$0.00
33	Utilities	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			$2,752,009.37		$524,911.81		$50,178.50
						Subtotal (all buidings) Direct Cost of Work (DC)	**$3,327,099.68**
General Conditions (GC)- 10% of Subtotal Direct Cost of Work							$332,709.97
Permitting - ($2500+ (DC + GC)-$1000000)/1000)*2)							$7,819.62
						Subtotal w/ Direct Overhead	**$3,667,629.27**
General Contractor Overhead - 5% Subtotal w/ Direct Overhead							$ 183,381.46
General Contractor Profit - 6% of Subtotal w/ Direct Overhead + GC Overhead							$ 231,060.64
						Subtotal w/ General Contractors Markup	**$4,082,071.37**
Builder's Risk Insurance - 1.05% of Subtotal w/ Construction Contingency							$ 34,934.55
Performance & Payment Bond - 2% of Subtotal w/ Construction Contingency							$ 66,541.99
						Total Construction Cost	**$4,183,547.91**
Escalation - 8% of Total Construction Cost per Year							$ -
						Total Escalated Construction Cost to the Year 2024	**$4,183,547.91**

Section 3

Program Document

Project Package 2

New Addition

Emergency Operations Center (EOC)
And
Headquarters Expansion

SBC 529/000-02-2019-01
Nashville, Davidson County, TN

April 11, 2023

Goodwyn Mills Cawood, LLC.
GMC Project No. ANAS 220042
NASHVILLE, TENNESSEE

Mechanical, Electrical, & Plumbing
Henderson Engineers
FRANKLIN, TENNESSEE

Project 2 – New Emergency Operations Center and Headquarters Expansion

Project Overview

Tennessee's State Emergency Operations Center (SEOC) activates during times of disaster or emergency. It serves as the hub for state agencies and their partners to support local governments and coordinate response efforts. The response is usually related to a natural disaster or large-scale emergency. Having an efficient and effective facility is key to successful emergency and disaster response.

The State of Tennessee's current Emergency Operations Center building has long exceeded the facility's capabilities, and currently drastically undersized. The current configuration causes the staff to be crowded and does not lend itself to collaboration and easy of communication required to best respond in an emergency situation. There have been significant changes in technology as well since the facility was constructed, and due to the current age of and configuration of the existing facility, makes it difficult to accommodate the best use of technology for this facility type.

An emergency operations centers' role is to serve as "a physical or virtual location from which coordination and support of incident management activities is directed," notes Ready.gov, a federal website. An emergency operations center is designed to support emergency response, business continuity and crisis communications activities," Ready.gov notes. EOC staffers manage preparations for an upcoming incident or the response to an ongoing one. "By gathering the decision makers together and supplying them with the most current information, better decisions can be made," Ready.gov notes.

An EOC shall:

1. provide continuity and communications throughout an event or incident, by identifying challenges, providing solutions and taking recommendations
2. coordinate responding local, state and federal agencies, organizations and companies, command and control, including legal requirements and political ramifications
3. provide resources and personnel throughout the divisions, sections, branches and units associated with ICS/National Incident Management System
4. manage data, general and public information utilizing recognized and scheduled forms and communication channels, and plan for the unexpected.

As a mission critical facility design should be optimized so staff can efficiently deliver services to community it will serve. To accomplish this objective, it is crucial safeguard against natural and manmade events so the facility can remain operational at all times. The project shall be designed to provide structural protection to withstand both environmental and civil threats, energy-efficient practices in accordance with the State's HpBr Sustainability initiative in addition to providing for the occupants' comfort and wellbeing.

The proposed new facility shall provide dedicated emergency services and disaster assistance for the State, with the ability to sustain uninterrupted operations during activations. In addition to the SEOC, the facility provides office space for all TEMA administrative departments, as well as partner organizations and integrated functions such as the Office of the State Fire Marshal, and the Tennessee Department of Transportation (TDOT) Traffic Management and Department of Health. The complex also supports a Tier 3 data center, media briefing, and training facilities.

The building design should take into account not only the function of the structure, but the comfort of the occupants as well. Large kitchens and break areas that take into account the 24-hour nature of the operation and need to support protracted operations are included.

The communications center house essential operating equipment that shall be protected against damage from vandalism, terrorism and civil disturbances. Whereas security used to be provided by digging deep into the ground, it is now a product of the engineered use of construction materials, bullet-resistant glazing, offset distances from potential hazards and electronic monitoring and control systems and resilient to severe weather such as a tornado.

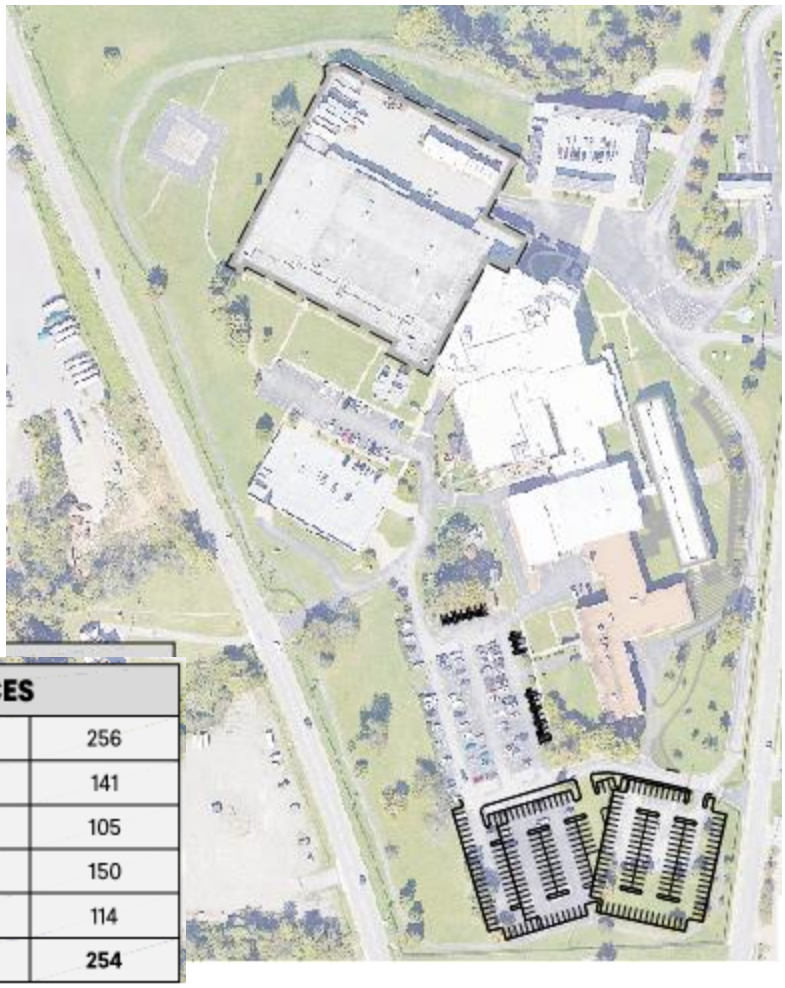
In addition, protection against chemical, biological, radiation, and nuclear (CBRN) hazards must also be taken into consideration. This in part encompasses the location of fresh-air intakes, the ability to quickly cut off the fresh air supply, air filtration, and air quality monitoring. NFPA standard also speaks to a variety of other issues, calling for at least two independent and reliable power sources. Also specified is the use of Uninterruptible Power Supplies (UPS) to augment the motor-driven generators. These devices provide a margin of safety should the generators fail, but just as important they filter electricity during periods of normal operation, protecting critical equipment from fluctuations in voltage and spikes.

Inside visitors should be greeted with warm and open, yet isolated spaces that route pedestrian traffic away from critical areas. Keypads, badge readers, and biometric sensors provide an additional level of safety. Glazing and walls that separate public from Mission Critical areas shall be bullet resistant.

In order to accommodate the program, it is proposed that the existing Building 110 be demolished to make room for a new building addition. The building addition is planned to be 4 stories with the first two stories housing the new TEMA and Emergency Operations Center, 300 seat auditorium and workout facility. The upper two floors will accommodate additional National Guard operations. The new addition will be positioned and sized to allow for the existing heliport to remain and allow for an extension of a road around the end of the facility to the rear of the campus.

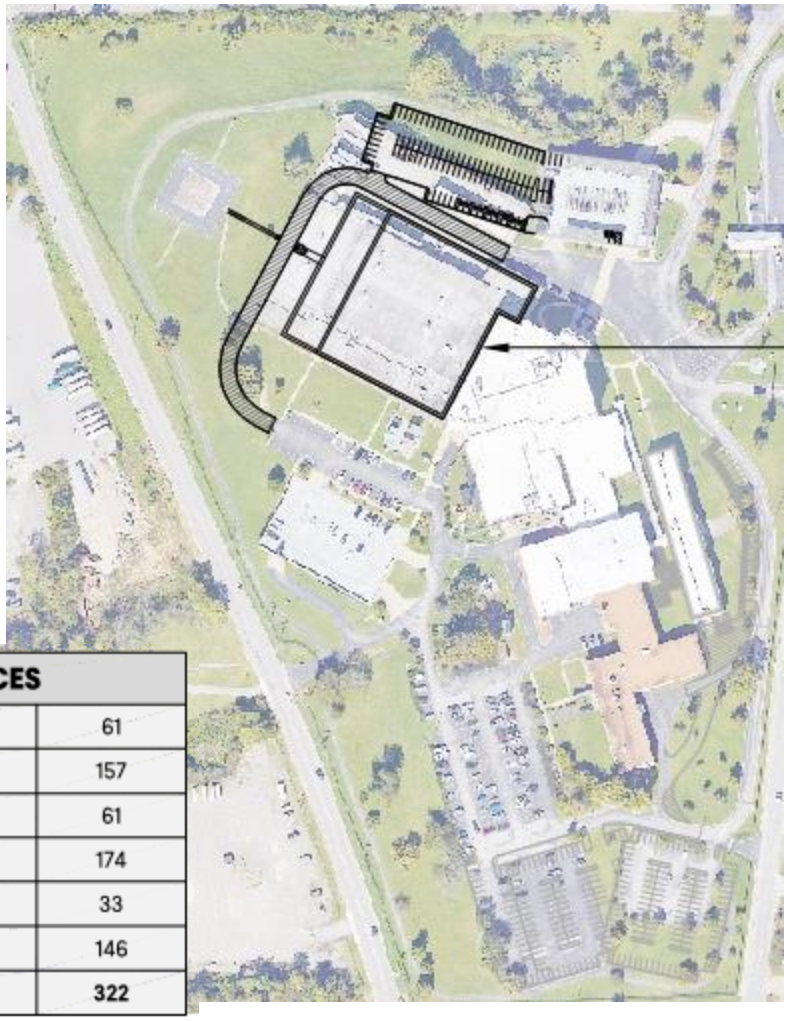
To accommodate the growth in employees on the campus, an additional 566 parking spaces will need to be added to the headquarter campus area. Two new parking structures are proposed. The first is to the South side of campus. This parking structure will be three tiers and accommodate approximately 254 parking spaces. The parking structure will have direct access from grade at each tiered level and will not have internal ramps. The second parking structure will be an extension of the existing parking structure at the front face of the facility. This extension of all three parking levels is proposed to accommodate 322 new additional parking spaces. The total parking requirement of the new headquarter campus is to be brought up to a total of 1254 parking spaces.

Parking Expansion



PARKING SPACES	
EXISTING SURFACE LOT	256
PROPOSED SURFACE LOT	141
PROPOSED PARKING DECK	105
PROPOSED PARKING DECK	150
PROPOSED PARKING DECK	114
NEW PARKING SPACES	**254**

Facility Program



PARKING SPACES	
EXISTING SURFACE DECK	61
PROPOSED SURFACE DECK	157
EXISTING PARKING DECK	61
PROPOSED PARKING DECK	174
EXISTING PARKING DECK	33
PROPOSED PARKING DECK	146
NEW PARKING SPACES	**322**

GMC

Program Summary

				SQUARE FOOTAGE		
Reference		Space Name		Authorized	Program NET	Programmed Gross
TEMA						
T1		ESC			3425	4281
T2		FEMA			2860	3575
T3		PLANNING			2546	3183
T4		TRAINING			8224	10280
T5		STS			1660	2075
T6		FINANCE			1181	1476
T7		TECH HAZARDS			1363	1704
T8		LOGISTICS			1730	2163
T9		TEAM DEVELOPMENT			926	1158
T10		NFIP/PUBLIC ASSISTNACE/MITIGATION SUITE			3492	4365
T11		MISSION SUPPORT			1730	2163
T12		FACILITIES			3607	4509
T13		STATE Watchpoint			10260	12825
T14		EOC			23780	29725
T15		ADMINISTRATION			1646	2058
T16		EXECUTIVE			3384	4230
T17		SUPPORT			17886	22358
Subtotal					**89700**	112125
National Guard						
H1		MPAD			3920	4900
H2		105th			7940	9925
H3		Air National Guard			4012	5015
H4		Public Affairs			3140	3925
H5		State Administration			3604	4505
H6		30th Troop Command			6320	7900
H7		230 DLD			4920	6150
H8		Counter Drug			5920	7400
H9		HRO			4760	5950
H10		MTOE Unit			7940	9925
Subtotal					**52476**	65595
SHARED						
S1		Gym		1225	6692	8365
S2		Auditorium			7800	9750
S3		Facilities			900	1125
Subtotal					**15392**	19240
Total Department Square Footage					**157568**	196960
Building Grossing Factor (30%)						59088
Total Gross						256048

GMC

Emergency Operations Center

Space	Type Space	Qty	NET SF	Total NET	Notes
ESC Suite					
ESC Coordinator Office	Private Office	1	120	120	Size based on State of TN Standards. Position has supervisory requirements and requires privacy
ESC Office Area	Cubicle	35	49	1715	Size based on State of TN Standards. Provide magnetic white boards on all walls.
Conference (16)	Hard Wall	2	320	640	Based on 20 NSF per person. Rooms to be adjacent with operable partition between to allow room to be combined as needed. Provide magnetic boards on all walls
Storage	Hard Wall	3	150	450	1 for TEMAC, 1 for EMAT, 1 for lockers
Enclave/ Breakout	Hard Wall	4	120	480	Based on 1 Breakout/Conference Space for every 10 persons
Coffee Alcove	Open	1	20	20	
Total NET				3425	
Departmental Grossing Factor (25%)				1.25	
Total Department Gross Square Footage				**4281**	
FEMA Suite	Operates independent of TEMA operations. Department to be located near entrance so that when space is being utilized FEMA operations they do not have to traverse through TEMA operations				
IOF / Joint Field Work Room	Hard Wall	1	1500	1500	Work Room set up to accommodate up to 50 with flexible room arrangement
Conference Room (16)	Hard Wall	1	320	320	
Storage - FEMA	Hard Wall	1	270	270	
Copy / Work	Open	1	150	150	
Enclave / Breakout	Hard Wall	5	120	600	Based on 1 Breakout/Conference Space for every 10 persons
Coffee Alcove	Open	1	20	20	
Total NET				2860	
Departmental Grossing Factor (25%)				1.25	
Total Department Gross Square Footage				**3575**	
Planning Suite					
Branch Manager Office	Private Office	1	120	120	Size based on State of TN Standards. Position has supervisory requirements and requires privacy
Planning Administrator Office	Private Office	2	120	240	Size based on State of TN Standards. Position has supervisory requirements and requires privacy
Planning Work Stations	Cubicle	12	49	588	Size based on State of TN Standards. Includes 4 future positions
FEMA Work Stations	Cubicle	2	49	98	Size based on State of TN Standards
Conference Medium (16)	Hard Wall	2	320	640	
Storage - TEMAC/EMAT	Hard Wall	1	150	150	

	Copy/Plotter	Open	1	300	300	Includes copier/scanner, plotter, and supplies. Room shared with Training Department
	Planning Area/ Library	Open	1	150	150	Includes 4 hotel cubicles 4, 6 bookshelves (33")
	Enclave / Breakout	Hard Wall	2	120	120	Based on 1 Breakout/Conference Space for every 10 persons
	Coffee	Open	1	20	20	
	Total NET				2546	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**3183**	
	Training / Exercise Suite	Department to be adjacent to Planning Department. Training rooms located on public side outside of department suite.				
	State Training Officer	Private Office	2	120	240	Size based on State standards. Office has Supervisory requirements and requires privacy.
	T/E Staff Work Stations	Cubicle	6	49	292	Size based on State of TN Standards
	Storage - Training materials	Hard Wall	1	350	350	
	Classroom/Training - Small	Hard Wall	2	1200	2400	Training rooms to be located on public side near entrance and restroom facilities. Rooms to be adjacent to each other and separated with a removable partition
	Classroom/Training - Large	Hard Wall	2	2400	4800	Training rooms to be located on public side near entrance and restroom facilities
	Enclave / Breakout	Hard Wall	1	120	120	Based on 1 Breakout/Conference Space for every 10 persons
	Coffee	Open	1	20	20	
	Total NET				8224	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**10280**	
	Finance Suite					
	Finance Administrator	Private Office	4	120	480	Size based on State standards. Office requires privacy due to nature of work.
	Staff Work Stations	Cubicle	9	49	441	Size based on State of TN Standards
	Copy/Work	Open	1	120	120	Separate department copy room required due to nature of work
	Enclave / Breakout	Hard Wall	1	120	120	Based on 1 Breakout/Conference Space for every 10 persons
	Coffee	Open	1	20	20	
	Total NET				1181	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**1476**	
	Tech Hazard Suite					
	TH Administrator/Supervisor	Private Office	3	120	360	Size based on State standards. Office has Supervisory requirements and requires privacy.
	FNF Work Stations	Cubicle	3	49	147	Size based on State of TN Standards
	FEMA Work Stations	Cubicle	2	49	98	Size based on State of TN Standards
	Hazmat Work Stations	Cubicle	2	49	98	Size based on State of TN Standards
	Hazmat Training Storage	Hard Wall	1	200	200	

	Conference Medium (16)	Hard Wall	1	320	320	
	Enclave / Breakout	Hard Wall	1	120	120	Based on 1 Breakout/Conference Space for every 10 persons
	Coffee	Open	1	20	20	
	Total NET				1363	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**1704**	
	Logistics Suite					
	Logistics Administrator	Private Office	1	120	120	Size based on State standards. Office has Supervisory requirements and requires privacy.
	Logistics Work Stations	Cubicle	4	100	400	Larger cubicles required due to job function including inventory responsibilities
	Conference Medium (16)	Hard Wall	1	320	320	
	Storage - Bulk	Hard Wall	1	750	750	
	Enclave / Breakout	Hard Wall	1	120	120	Based on 1 Breakout/Conference Space for every 10 persons
	Coffee	Open	1	20	20	
	Total NET				1730	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**2163**	
	Team Development Suite					
	TD Manager	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	TD Staff Work Stations	Cubicle	4	49	196	Size based on State of TN Standards
	Conference Medium (16)	Hard Wall	1	320	320	
	Storage - Departmental	Hard Wall	1	150	150	
	Enclave / Breakout	Hard Wall	1	120	120	
	Coffee	Open	1	20	20	
	Total NET				926	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**1158**	
	NFIP/Public Assistance/Mitigation Suite					
	NFIP					
	NFIP Administrator	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	NFIP Manager	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	FEMA Work Stations	Cubicle	2	49	98	Size based on State of TN Standards
	Staff Work Stations	Cubicle	6	49	294	Size based on State of TN Standards. Includes space for 2 contract employees.
	Public Assistance					
	PA Manager	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	Finance Officer	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.

	Staff Work Stations	Cubicle	8	49	397	Size based on State of TN Standards. Includes space for 2 contract employees.
	FEMA Work Stations	Cubicle	2	49	98	Size based on State of TN Standards
	Mitigation					
	State Mitigation Officer	Private Office	1	120	120	Size based on State of TN Standards.
	FEMA Work Stations	Cubicle	2	49	98	Size based on State of TN Standards.
	Staff Work Stations	Cubicle	8	49	392	Size based on State of TN Standards. Includes space for 3 future employees.
	Shared Spaces					
	Conference Medium (16)	Hard Wall	2	320	640	
	Copy/Work	Open	1	250	250	Locate close to Central Division file storage space. High use room. Include space for copier/scanner, plotter, shredder, office supply storage
	Storage - Departmental	Hard Wall	1	250	250	
	Enclave / Breakout	Hard Wall	3	120	360	
	Coffee	Open	1	20	20	
	Total NET				3492	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**4365**	
	Mission Support Suite					
	MS Administrator	Private Office	2	120	240	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	Staff Work Stations	Cubicle	4	100	400	Larger cubicles required due to job function
	Conference Medium (16)	Hard Wall	1	320	320	
	Storage - Secure	Hard Wall	1	750	750	
	Coffee	Open	1	20	20	
	Total NET				1730	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**2163**	
	Facilities	Locate adjacent to National Guard Facilities Department				
	Supervisor	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	Trustee Office	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy.
	Staff Work Stations	Cubicle	3	49	147	Size based on State of TN Standards.
	Storage - Housekeep / Supply	Hard Wall	1	1200	1200	
	Freight Storage	Hard Wall	1	2000	2000	Locate adjacent to Dock
	Coffee	Open	1	20	20	
	Total NET				3607	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**4509**	
	State Watchpoint					

	SWP Administrator	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy
	SWP Supervisor	Private Office	1	120	120	Size based on State of TN Standards. Office has Supervisory requirements and requires privacy
	Metrologist Office	Private Office	1	150	150	Size based on State of TN Standards. Requires private due to noise level in department, larger size doe to the additional monitors required for position.
	Watch Floor	Open	10	200	2000	Locate adjacent to EOC. Windows looking into EOC floor
	Operations Centers	Hard Wall	3	2000	6000	Support for outside team members including Traffic Control, Health, etc.
	Conference Small (8)	Hard Wall	2	160	320	
	Storage - Secure	Hard Wall	1	500	500	Firearm Storage in rear of storage room
	Copy/Work	Open	1	150	150	
	Enclave / Breakout	Hard Wall	5	120	600	
	Breakroom	Hard Wall	1	300	300	
	Total NET				10260	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**12825**	
	EOC (Emergency Operations Center)					
	Operations Floor	Open	250	64	16000	2 story space minimum to allow for sight lines to information screens and across room.
	Breakout Room - Standard (10)	Hard Wall	10	250	2500	Adjacent and opening to EMC. Wall to EOC to have large window. All other walls to have continuous magnetic erase boards.
	Breakout Room - Large (35)	Hard Wall	2	700	1400	Adjacent and opening to EMC. Wall to EOC to have large window. All other walls to have continuous magnetic erase boards.
	GIS / Mapping	Hard Wall	1	500	500	Staff of 3, 3 plotters
	Auxiliary Communications	Hard Wall	1	400	400	Staff of 4
	IT Interface / Control	Hard Wall	1	280	280	Staff of 2
	Joint Information Center	Hard Wall	1	1000	1000	Capacity between 20-30
	Copy/Work	Open	1	150	150	
	Green Room	Hard Wall	1	150	150	
	Media Briefing	Hard Wall	1	1000	1000	
	Media Tech Room	Hard Wall	1	250	250	
	Media Plug In	Hard Wall	1	150	150	
	Total NET				23780	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**29725**	
	Administration Suite					
	Staff Service Coordinator Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	Private Sector Coordinator Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.

	Legal Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	E & I Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	Policy Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	Faith Based Outreach Office	Private Office	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	External Affairs Staff	Private Office	2	120	240	Size based on State of TN Standards. Requires privacy due to nature of work.
	Support Staff	Cubicle	4	49	196	Size based on State of TN Standards
	Enclave / Breakout	Hard Wall	1	120	120	
	Storage - External Affairs	Hard Wall	1	200	200	
	Copy/Work	Open	1	150	150	
	Coffee	Open	1	20	20	
	Total NET				**1646**	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**2058**	
	Executive Suite					
	Governor Office / Staff Suite	Private Office	1	1000	1000	Directly adjacent to Large Conference Room
	External Affairs Officer	Hard Wall	1	120	120	Size based on State of TN Standards. Requires privacy due to nature of work.
	Conference Large (16 - Horse Shoe)	Hard Wall	1	500	500	Direct access from Governor' Suite and Director's office
	Conference Room (8)	Hard Wall	1	240	240	
	TEMA Director Office	Hard Wall	1	300	300	Directly access to large Conference Room and private restroom / shower
	TEMA COS Office	Hard Wall	1	200	200	
	Exec Assist Work Station	Cubicle	2	49	98	Size based on State of TN Standards. Includes one future position.
	Waiting Lobby	Open	1	150	150	
	TEMA Assistant Director Office	Hard Wall	1	200	200	
	Storage	Hard Wall	1	120	120	
	Copy/ Work Room	Hard Wall	1	150	150	
	Kitchenette	Open	1	150	150	
	Departmental Staff Restroom	Hard Wall	2	48	96	
	Private Restroom/Shower	Hard Wall	1	60	60	
	Total NET				**3384**	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**4230**	
	Support					
	UPS Room	Hard Wall	1	600	600	Based on EOC at PA
	Battery Room	Hard Wall	1	500	500	Based on EOC at PA
	IT/Server Room	Hard Wall	1	6000	6000	
	Generator Support	Hard Wall	1	1000	1000	

	Radio Room	Hard Wall	1	1000	1000	
	Sleeping Quarters	Hard Wall	12	120	1440	
	SCIF	Secure	2	500	1000	
	Shared Floor Copy / Workroom	Open	2	150	300	
	Laundry	Hard Wall	1	150	150	
	Lobby	Open	1	750	750	Provide bullet resistant glass at entrance and at all windows between lobby and staff areas
	Rehab/First Aid	Hard Wall	1	150	150	Adjacent to Decontam
	Decontam	Hard Wall	1	400	400	Direct access from exterior. Adjacent to First Aid
	Decompression / Nursing	Hard Wall	1	120	120	Adjacent to First Aid
	Central File Storage / Archive	Hard Wall	1	1250	1250	
	Kitchen	Hard Wall	1	700	700	
	Serving Line	Open	1	560	560	
	Cafeteria Dining	Open	100	14	1400	
	Dry Storage	Hard Wall	1	120	120	
	Janitorial	Hard Wall	1	30	30	
	Receiving	Hard Wall	1	56	56	
	Refrigeration		1	80	80	
	Dishwash/Pot Wash	Hard Wall	1	230	230	
	Trash	Hard Wall	1	50	50	
	Total NET				**17886**	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**22358**	
	Total NET				**89700**	
	Total Departmental Gross				**112125**	

GMC

National Guard

	Space	Type Space	Qty	NET SF	Total NET	Notes
	118th MPAD					
	O3 - Office	Private Office	1	110	110	
	O2 - Workstation	Cubicle	1	100	200	
	E8 - Office	Private Office	1	110	110	
	E7 - Workstation	Cubicle	2	100	200	
	E6 - Workstation	Cubicle	4	100	400	
	E5 - Workstation	Cubicle	6	100	600	
	E4 - Workstation	Cubicle	5	100	500	
	Supply	Hard Wall	1	1300	1300	
	Vault	Vault	1	600	600	
	Total NET				3920	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**4900**	Authorized 4000 s.f.
	105th					
	O3 - CDR Office	Private Office	1	110	110	
	O2 - 1 XO/3 Platoon Leaders	Cubicle	1	100	100	
	W2 - HR Tech	Cubicle	1	100	100	
	E8 - SGT Office	Private Office	1	110	110	
	E7 - 1 Ops SGT/ 3 PLT SGT / C2CRE	Cubicle	4	100	400	
	E7 - ARG	Private Office	1	110	110	
	E6 - 10 Squad Leaders	Cubicle	9	100	900	
	E6 - AGR	Private Office	1	110	110	
	E5 Workstation	Cubicle	11	100	100	
	E4 Workstation	Cubicle	10	100	1000	
	W3 Workstation	Cubicle	12	100	1200	
	Supply	Hard Wall	1	2700	2700	
	Total NET				7940	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**9925**	
	Air National Guard					
	Leadership Suite					
	COL Deputy Commissioner	Private Office	1	300	300	
	Col Tech - Chief of Staff	Private Office	1	200	200	

	BG - Director of Joint Staff	Private Office	1	200	200	
	CMSag - Sr. Enlisted	Cubicle	1	100	100	
	T5 Administrative Assistant	Cubicle	1	100	100	
	Storage Cabinet	Open	1	30	30	
	Conference Room (12)	Hard Wall	1	240	240	Direct access from Suite and COL Deputy office
	Administrative Suite					
	A3 COL Mday	Private Office	1	120	120	
	MDAY Staff (inc A4)	Cubicle	6	100	600	
	State Air Surgeon O6	Private Office	1	120	120	
	State JAG	Private Office	1	120	120	
	SMSgt, AGR	Private Office	1	120	120	Adjacent to Meeting Area
	LT Col - Public Affairs	Cubicle	1	100	100	
	Capt - Tech	Cubicle	1	100	100	
	MSgt, Tech	Cubicle	1	100	100	Adjacent to Mday Staff
	MDAy Staff	Cubicle	2	100	200	Adjacent to Master Sargent
	J6 Representative (IT Support)	Private Office	1	120	120	Work counters with one knee workspace
	Hotel Workstations	Cubicle	8	49	392	
	Meeting Space	Open	1	450	450	Incorporated within work cubicle area
	Storage IT	Hard Wall	1	100	100	Adjacent to J6 Representative
	Storage Supply	Hard Wall	1	100	100	
	Coffee /Refreshment	Open	1	100	100	
	Total NET				4012	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**5015**	
	Public Affairs					
	Legislative Liaison	Private Office	1	200	200	
	Director Office	Private Office	1	200	200	
	Assistant Office	Cubicle	2	100	200	
	Workstation - Medium	Cubicle	5	80	400	
	DA Photo Lab	Hard Wall	1	500	500	
	Media Production Room	Hard Wall	1	820	820	
	PAO Storage	Hard Wall	1	1020	1020	
	Total NET				3140	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**3925**	
	State Administration					
	Administrative Services					

	Command	Private Office	1	225	225	
	Work Station	Cubicle	1	49	49	
	State Human Resources					
	HR Director	Private Office	1	120	120	
	Talent Management	Private Office	1	120	120	
	Executive Administrative Assistant	Cubicle	1	49	49	
	HR Manager	Private Office	1	120	120	
	HR Analyst	Private Office	1	120	120	
	ASA 3	Private Office	1	120	120	
	Budget Director	Private Office	1	120	120	
	Payroll Supervisor	Private Office	1	120	120	
	Payroll Officer	Private Office	1	120	120	
	Internal Review	Private Office	1	120	120	
	Program Monitor	Private Office	2	120	120	
	Asst Procurement Director	Private Office	1	120	120	
	Procurement Manager	Private Office	1	120	120	
	Procurement	Private Office	3	120	120	
	Finance and Administration					
	Controller	Private Office	1	120	120	
	Accounts Payable - ASA 3	Cubicle	1	49	49	
	Accounts Payable - Account Tech	Cubicle	2	49	98	
	AR/Billing/ GL - Manager	Cubicle	1	49	49	
	AR/Billing/GL - Accountant Office	Cubicle	4	49	196	
	AR/Billing/GL - Workstation	Cubicle	1	49	49	
	Enclave	Hard Wall	1	120	120	
	Support					
	Work/Copy room	Hard Wall	1	150	150	
	Classroom	Hard Wall	1	480	480	Space for 30
	Storage	Hard Wall	1			
	File Storage	Open	10	7	70	Large legal
	Total NET				3604	

	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**4505**	
	30th Troop Command	(Assigned 36, Authorized 44)				
	Office	Private Office	1	120	120	
	Workstation	Cubicle	43	100	4300	
	Supply	Hard Wall	1	1300	1300	
	Vault	Vault	1	600	600	
	Total NET				6320	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**7900**	
	230 DLD	(Assigned 29, Authorized 30)				
	Office	Private Office	1	120	120	
	Workstation	Cubicle	29	100	2900	
	Supply	Hard Wall	1	1300	1300	
	Vault	Vault	1	600	600	
	Total NET				4920	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**6150**	
	Counter Drug	(Assigned 40 Current; Authorized - Varies)				
	Office	Private Office	1	120	120	
	Workstation	Cubicle	39	100	3900	
	Supply	Hard Wall	1	1300	1300	
	Vault	Vault	1	600	600	
	Total NET				5920	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**7400**	
	HRO					
	Director Office	Private Office	1	200	200	
	Deputy Office	Private Office	1	150	150	
	Plans/Ops WorkStation	Cubicle	1	100	100	
	Labor Relations Office	Private Office	1	120	120	
	Equal Opportunity Manager	Private Office	1	120	120	
	EEO Specialist	Private Office	1	120	120	
	Staffing and Classification Branch	Private Office	1	120	120	
	Work Station	Cubicle	6	100	600	

	Customer Service Branch	Private Office	1	120	120	
	Work Station - Human Resource Development	Cubicle	6	100	600	
	AGR Office	Private Office	1	120	120	
	Workstation	Cubicle	1	100	100	
	Integrated Prevention	Private Office	6	120	720	
	Sexual Assault Prevention	Private Office	2	120	240	
	Reliance, Risk Reduction, Suicide Prep	Private Office	5	120	600	
	Work / Copy	Open	1	100	100	
	Conference / Training Room (20)	Hard Wall	1	630	630	
	Total NET				4760	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**5950**	
	MTOE Unit					
	Office	Private Office	1	110	440	
	Workstation	Cubicle	48	100	4800	
	Supply	Hard Wall	1	2700	2700	
	Total NET				**7940**	
	Departmental Grossing Factor (25%)				1.25	
	Total Department Gross Square Footage				**9925**	
	Total Department NET				**52476**	
	Total Departmental Gross				**65560**	

Shared Spaces

Space	Type Space	Qty	NET SF	Total NET	Notes
Gym	Federal allocation 1225				
Weight Floor	Open	1	1225	1225	18 Cable weight machines, 962 s.f. of Free-weight area (rubber floor required)
Cardio Floor	Open	1	1885	1885	Equipment: 2 rowers, 2 upright bikes, 2 recumbent bikes, 7 ellipticals, 9 treadmills
Locker Rooms/Shower/ Restroom	Hard Wall	2	600	600	
Janitorial	Hard Wall	1	30	30	
Turf	Open	1	2342	2342	24'x98' (3 lanes)
Total NET				6692	
Departmental Grossing Factor (25%)				1.25	
Total Department Gross Square Footage				**8362**	
Auditorium					
Auditorium Lobby	Hard Wall	1	1500	1500	
Auditorium	Hard Wall	300	12	3600	Tiered seating – 300 seats
Stage	Open	1	1200	1200	
Auditorium Storage	Hard Wall	1	400	400	
Green Room	Hard Wall	1	150	150	
Projection Control Room	Hard Wall	1	400	400	
Projection Room Rear	Hard Wall	1	400	400	
Total NET				7800	
Departmental Grossing Factor (25%)				1.25	
Total Department Gross Square Footage				**9750**	
Facilities					
Facilities Storage	Hard Wall	1	500	500	
Receiving Area	Hard Wall	1	400	400	
Total NET				**900**	
Departmental Grossing Factor (25%)				1.25	
Total Department Gross Square Footage				**1125**	
Total Department NET				**15392**	
Total Departmental Gross				**19240**	

RECOMMENDED SOLUTIONS – New Addition

BUILDING SERVICES

- Domestic Water Service:
  - One (1) 6 inch domestic water service will be extended from the campus water main loop to the addition with reduced pressure zone backflow preventers located within the building.
- Fire Water Service:
  - One (1) 8 inch fire protection water lines will be extended to the addition from the campus fire service loop on site to a backflow preventer, located inside the building at service entrance located within the facility.
- Sanitary Sewer Service:
  - Multiple 6" sanitary sewer mains will be extended from the building addition to the campus sewer main.
- Storm Water Service:
  - Multiple 8" storm water mains will be extended from the building addition to the campus storm drain main.
- Natural Gas Service:
  - A medium pressure natural gas service line will be extended from the nearest gas utility main to the building terminating at a regulator/meter set by the local gas company. A 6 inch medium pressure natural gas line will then be extended from the regulator/meter set to the facility.
- Electrical Services:
  - Normal Power Electric Service:
    - The Utility will provide 480-volts, 3-phase power.
  - Emergency Power Electrical Service:
    - Two generators will provide 480-volts, 3-phase power.
- Fire Alarm Service:
  - Existing Fire Alarm and Security services will be.

SPECIFIC BUILDING REQUIREMENTS

Seismic Requirements:

- The building will be designed to a Seismic Class C Requirement.

Redundancy Requirements:

- Due to the TEMA Essential Systems requirements the building will be provided with 'n+1' redundancy on all major Mechanical, Electrical and Plumbing systems to ensure that the building will operate during and beyond an Emergency Event in the area.

EXISTING CONDITIONS

Division 21 – Fire Sprinkler

- The existing service building to be demolished for the new HQ addition is currently served by a dedicated fire service entrance near the North Garage. The existing service will be disabled and capped for future. All existing Fire Sprinkler equipment and materials in the existing building will be demolished accordingly.

Division 22 – Plumbing

- The existing service building to be demolished is currently served by a dedicated water entrance near the North Garage. All existing plumbing equipment and material will be demolished accordingly. The existing service entrance will be valved and capped.

Division 23 – Mechanical

- The existing service building to be demolished is currently served by various split system AC units, packaged DX RTUs, and PTAC units. All existing HVAC equipment and materials will be demolished accordingly.

Division 26 – Electrical

- The existing electrical service for the building will be removed. All existing underground secondary feeders, main switchboard, and branch panels will be removed.

Division 28 – Fire Alarm and Security

- The existing service building to be demolished is partially served via the campus Fire Alarm System. All existing Fire Alarm Equipment and material shall be removed accordingly.

Proposed Changes

Division 21 – Fire Sprinkler

<u>South Parking Deck</u>

- A new 4" Fire Service will be provided for the Lower Level of the Parking Deck. A 4" Fire Main shall be tapped in to the existing Campus Loop Piping to serve the Parking Deck with a new backflow preventer. A dry-type fire service and associated valves, air compressor, and piping shall be provided to serve the Lower Level Parking Deck and Stairwells.

<u>EOC and HQ Addition</u>

- A new 6" Fire Service will be provided for the new Building Addition.

- Due to building height a new 75-hp Fire Pump and 5-hp Jockey Pump will be provided to accommodate the building. A 6" fire main shall be routed through-out the building to new 6" standpipes in the stairs. All zone valves and associated tamper/flow switches shall be located in the stair standpipes.
- All new sprinkler heads shall be quick response type heads with design requirements below.
- A new FM-200 Fire Suppression System shall be provided for the Data Room and UPS Room only.
- All areas in the Operations Floor shall be provided with a Pre-Action Type Wet Sprinkler System.

Design Criteria:

- Complete automatic sprinkler protection complying with nfpa 13 and fed from the main building fire riser in the Main Mechanical Room shall be provided throughout all areas of the building. sprinkler protection will be designed for light hazard with areas designed for ordinary hazard group 1. sprinkler piping in all areas subject to temperatures below 40 degrees f shall be protected from freezing in accordance with nfpa 13. the fire sprinkler riser should be designed to support expansion of the facility.
- All wet pipe sprinkler piping 2 ½-inches and greater may be steel, schedule 10. wet pipe sprinkler piping 2-inches and smaller shall be steel, schedule 40. no piping shall be permitted exposed in finished spaces, including beneath sprinkler protected canopies. cpvc piping shall not be permitted.
- Sprinkler Design Requirement
    - Private Room - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Light Hazard 0.1/1500sqft. Maximum sprinkler spacing 225 sqft
    - Corridor - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Light Hazard 0.1/1500sqft. Maximum sprinkler spacing 225 sqft
    - Dining - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Light Hazard 0.15/1500sqft. Maximum sprinkler spacing 225 sqft
    - Janitor - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Ordinary Hazard (Group 1) 0.1/1500sqft. Maximum sprinkler spacing 130 sqft
    - Electrical Room - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Ordinary Hazard (Group 1) 0.1/1500sqft. Maximum sprinkler spacing 130 sqft
    - Office - Wet pipe sprinkler protection will be provided throughout the space in accordance with NFPA 13. Light Hazard 0.1/1500sqft. Maximum sprinkler spacing 225 sqft

- Sprinklers types and finishes shall be as follows: (coordinate any other area not mentioned below with architect and owner prior to installation)
    - Office and central processing spaces shall be quick response, white, semi-recessed pendent, 5.6 k-factor.
    - Public areas (lounges, server/dining areas, conference rooms, public corridors) shall be quick response, concealed pendent with white cover plate, 5.6 k-factor.
    - Areas with wood ceiling or wood laminate ceiling shall be quick response, concealed pendent with black cover plate, 5.6 k-factor.
    - Corridors shall be quick response, white, semi-recessed pendent, 5.6 k-factor.
    - All sprinklers beneath exterior canopies shall be quick response, white, semi-recessed pendent dry-type, 24-inches in length, 5.6 k-factor.
    - In all unfinished spaces sprinklers shall be quick response, brass, upright, 5.6 k-factor.
- The sprinkler system shall be provided with water-flow initiating device and test/drain assembly for each floor. a common drain shall be provided connecting each test/drain assembly.

Division 22 – Plumbing

South Parking Deck

- Domestic Cold Water
    - No Domestic Water will be provided.
- Storm Water
    - New linear drains shall be provided for the top level of the Parking Deck.
    - Multiple 8" storm water mains shall be connected to the linear drains and shall be routed to the outside of the building and the associated oil water separator by civil engineer.

EOC and HQ Addition

- Domestic Cold Water
    - Existing building is served by a new 6 inch domestic water service line.
    - The water services exterior to the building along with metering will be designed by the Civil Engineer. A main shut-off valve will be provided in new water service line inside the building along with a full-size reduced pressure zone backflow preventer which will allow non-interruptible water service.
    - Due to existing water system pressure concerns, the building will be provided with a new Domestic Water Booster Pump. Cold water piping will be extended from the building service entrance through-out the Addition.

- Domestic Hot Water
    - The addition will be served by three (3) new instantaneous water-to-water heat exchangers located in the Basement Mechanical Room. The water heaters shall be designed to allow for an 'n+1' arrangement and utilize the building hot water boilers as the primary source of heating to utilize the hot water boilers secondary fuel source of fuel oil. The water heaters will be connected to two (2) 2,500 gallon water storage tanks located in the basement, that shall be maintained with an internal temperature of 140 degrees F. ASSE 1017 digital master mixing valves shall be provided at the discharge of the tanks to circulate water through-out the building at 120 degrees F. The tanks will be provided with dedicated run-around pumps that will be piped to allow for filling of bottles during emergency usage times.
    - The addition will be provided with a hot water supply and recirculation main that will be routed through-out the building to all new fixtures.
- Sanitary And Vent
    - Multiple new 6 inch sanitary drain lines will be extended from the Addition out to the campus system by the Civil Engineer.
    - Sanitary vent piping system will be extended vertically through the building at various locations before tying together and terminating through the flat roof.
    - A combination of trench and floor drains will be provided at pieces of equipment as required to receive condensate and other waste produced by the equipment.
- Storm Water
    - Multiple new 8" storm drain line serving the Addition will be extended and connected to the existing storm drain system serving the campus. Roof drains and interior horizontal/vertical storm leaders will convey rainwater from the flat roof to the storm drainage system.
    - New secondary overflow roof drain system will be installed independent from the primary roof drain system to protect against ponding on the roof in the event of primary roof drain blockage. The overflow storm piping system shall be terminated through various downspout nozzles on the exterior face of the facility.
- Natural Gas
    - A medium pressure natural gas service line will be extended from the facility's regulator/meter, provided by the local gas company, and routed to serve the new equipment in the Main Mechanical Room.
    - Point-of-use gas pressure regulators will be provided at each individual piece of equipment. A gas pressure regulator will also be provided in the Main Mechanical Room to reduce gas pressure to 7"-10" water column.

- Plumbing Fixtures
    - Manufacturers of plumbing fixtures, faucets, and trim will be subject to approval by Client.
    - Plumbing fixtures, faucets, and trim will be standard commercial grade water-saving type and designed to meet the American Disabilities Act (ADA) guidelines where required or indicated.
    - ASSE 1070 mixing valves shall be provided on all Public Lavatories to produce 110 degree F water.
    - Faucets and trim shall comply with NSF 61 Annex G and / or NSF 372 for wetted surfaces containing no more than 0.25% lead by weight for domestic water distribution for drinking or cooking.
    - Emergency eyewash/shower station(s) will be provided where chemicals are used at pieces of equipment and as required by code.

Facility Design Criteria

- Domestic Water
    - Type L, drawn copper tube with wrought copper fittings and solder joints shall be installed for domestic water piping 8" and smaller above ground inside the building.
    - Cement-lined ductile-iron pipe with rubber gasketed joints shall be installed from 5 feet outside the building to the backflow preventers at the water entrance inside the Central Plant.
    - Shut-off valves will be provided in all branch lines, for each gang of fixtures, and at equipment connections for maintenance.
    - Backflow preventers and/or vacuum breakers will be provided at all interconnections between the domestic water system and points of possible contamination.
    - Piston-type water hammer arresters shall be provided in water supply branch lines at fixtures and equipment throughout the facility to prevent the harmful effects of water hammer.
    - Domestic water piping will be insulated with 1" thick fiberglass insulation with "all service jacket".
- Domestic Cold Water
    - Cold water piping will be extended throughout the facility to plumbing fixtures, mechanical equipment, and any other items requiring potable cold water.
    - Non-freeze wall hydrants concealed in stainless steel chrome-plated boxes will be located around the exterior face of the building at integrals no greater than 200 feet, at the loading dock, and at the building entrances.
    - Non-freeze roof hydrants will be located on the flat roof areas at various locations for rooftop equipment maintenance and washdown. Non-freeze roof hydrants will be included with the Blox Uber module addition area.
    - Non-potable irrigation water supply, protected by backflow preventers, will be extended to water features and landscaping beds.

- Domestic Hot Water
    - Hot water piping will be extended throughout the facility to plumbing fixtures and any other items requiring potable hot water. The design will attempt to reuse and tie into existing piping as much as able. Additional review will be required to confirm what piping maybe reused in the new design.
    - Each hot water main will be returned through the hot water recirculation piping system with automatic flow control valves at each piping intersection for proper balancing before returning to the water heating system in the main mechanical room.
    - Hot water will be delivered at 140°F to individual fixtures and tempered with cold water to suitable temperatures by means of a point-of-use thermostatic mixing valve at each fixture for compliance with code (110°F at lavatories, 120°F at sinks).
- Sanitary And Vent
    - Hubless cast-iron soil pipe and fittings, with heavy duty no-hub couplings for piping 4" and larger, shall be installed above ground within the building for the following:
        - Soil and waste stacks
        - Grease waste piping
        - Central Plant waste piping
    - PVC DWV Schedule 40 solid wall plastic pipe and fittings shall be installed for horizontal soil and waste branch piping and all vent piping above ground within the building, except no plastic pipe is allowed in return air plenums.
    - PVC DWV Schedule 40 solid wall plastic pipe and fittings shall be installed below ground within the building to 6 inches above slab on grade.
    - Hub-and-spigot, service weight, cast-iron soil pipe and fittings with gasketed joints shall be installed below ground within the building for the following:
        - Grease waste and vent piping
        - Central Plant waste and vent piping
    - Sanitary drain lines sloped for gravity flow will extend throughout the building expansion, above and below slab, to serve plumbing fixtures, floor drains, and mechanical equipment within the expansion.
    - New vent lines will be provided throughout the building expansion for collecting vent discharge from the plumbing fixtures with vent terminals through flat roof areas at various locations at a minimum of 25 feet from fresh air intakes.
    - Floor and/or wall cleanouts will be provided throughout the facility expansion as coordinated with the Architect/Owner for rodding purposes.
    - Floor drains shall be provided in public toilet rooms, bathrooms with showers, mechanical rooms, and elsewhere as required to receive condensate and other waste from pieces of equipment within the building expansion. If additional drains are required within the renovated areas, those will be added.

- Storm Water
    - Hubless cast-iron soil pipe and fittings with heavy duty no-hub couplings shall be installed above ground within the building expansion.
    - PVC DWV Schedule 40 solid wall plastic pipe and fittings shall be installed below ground within the building to 6 inches above slab on grade.
    - Storm drain lines sloped for gravity flow will extend throughout the building, above and below slab, to carry rainwater from roof drains to the exterior of the building.
    - Storm drain piping, horizontal and vertical, will be insulated with 1" thick fiberglass insulation with "all service jacket".
- Natural Gas
    - Schedule 40 black steel pipe with threaded joints and fittings for 2" and smaller and welded joints for 2-1/2" and larger shall be installed for natural gas piping inside the building.
    - Plug valves will be provided at all equipment connections.

Division 23 – Mechanical

South Parking Deck

- The new Fire Service Entrance room will be provided with a 5-kw electric heater for freeze protection to accommodate summer conditions two (2) new louvers will be provided in the space, with one louver being provided with an inline fan to allow for circulation and both louvers provided with motorized shut-off dampers.

EOC and HQ Addition

- Air Handling
    - The addition will be served by central air handling system that utilizes cooling only Water Source Packaged DX AC (SWUD) Units located in mechanical rooms on the floors. The SWUD units will be provided with DX cooling coils, MERV 14 filters, variable speed supply fans, and UV lights. For all TEMA spaces, the SWUD units shall be arranged in an 'n+1' arrangement for increased redundancy.
    - Medium pressure supply ductwork shall be extended from the SWUD units to Variable Air Volume (VAV) terminal units for zone control. The VAV boxes will be provided hot water coils for zone temperature coil. Low pressure supply ductwork shall be extended from the associated VAV box to diffusers and grilles in the spaces. It is assumed that there will be one (1) VAV box per 1,000 sqft.
    - Return path shall be via and above ceiling return plenum. Transfer grilles and ductwork shall be utilized to allow for return air to connect back to the main mechanical room. Spaces shall be provided with egg-crate return grilles with sound boots provided internal duct liner to reduce sound transmission above the ceiling.

- General Exhaust from the floor shall be routed from each floor up to two (2) roof mounted Energy Recovery Units (ERU) via new chases. The ERUs shall precondition the building Outside Air utilizing an energy recovery wheel as well as a water source DX coil and natural gas heater, as well as be provided with MERV 14 filters and variable speed supply and exhaust fans. Low pressure supply ductwork will be routed from each ERU to supply outside air to the Mechanical Rooms and associated SWUD units on each floor.

- Cooling Water
  - The water source AC units will be served by three (3) 400-ton closed circuit cooling towers located in the Mechanical yard outside the Basement Mechanical Room. Each cooling tower will consist of two (2) 200-ton cells with a 30-hp fan per cell. Water will be circulated through-out the building via three (3) 1,200-gpm 60-hp horizontal split case pumps and associated piping. all pumps and cooling tower fans will be provided with variable frequency drives (VFD). All towers and pumps will be rated for 20% glycol and provided with 'n+1' redundancy.
- Heating Water
  - The building heating and domestic hot water for the building will be provided via five (5) 2,000-MBh high-efficiency dual fuel, natural gas and fuel oil, hot water boilers. The boilers will be served by three (3) 200-gpm 15-hp end suction pumps that circulate water through-out the building to the associated VAV box hot water coils, and three (3) 100-gpm 3-hp ceiling mounted inline pumps to circulate water through the domestic water heaters. All pumps will be provided with VFDs and provided with 'n+1' redundancy.
- Controls
  - All new mechanical, electrical and plumbing equipment will be provided with new DDC type controls and will be integrated with the campus's existing DDC control system.
- Miscellaneous
  - Provide new gas hot water boilers serving the new addition with sealed combustion vent and intake piping to outside of building.

<u>Design Criteria:</u>

- Outdoor Design Temperature
  - The ASHRAE outside summer and winter design conditions for Tallahassee FL will be utilized. Ambient Design Conditions for the central plant and a more conservative value for distributed equipment.:
    - Heating: 14.9°F db (99.6%) 5.2°F db (5 year extreme)
    - Cooling: 94.4°F db (0.4%) 100.2°F db (5 year) / 74.7°F wb (MCWB)
    - Dehumidification: 82.8°F db (0.4%)/ 75.1°F dp

- Inside Temperatures
    - Indoor Design:
        - Summer: 72°F DB/50% RH
        - Winter: 72°F
- Minimum Ventilation Requirements
    - The minimum ventilation requirements will be provided with mechanical ventilation subject to compliance with ASHRAE 170-2017 for healthcare areas and International Building Code for area not regulated by the healthcare code.
    - Noise Criteria (NC) Guidelines for Air System Design
        - All areas unless noted NC 40 – NC 45
        - Office/Administration NC 30 – NC 40
        - Corridors and Public spaces NC 35 – NC 45
        - Conference Rooms NC 30 – NC 35
- Energy Efficiency
    - The building will be constructed subject to compliance with 2020 IECC performance path for minimum energy efficiency compliance with state building codes.

Division 26 – Electrical

South Parking Deck

- Provide a new electrical service from the existing CM building utility transformer that is located adjacent to the existing surface south parking lot. This new service will be rated 100-amps at 480/277-volts, three-phase.
- Provide a 100-amp, 480-volt panel A to feed power to all lights and the electric heater. Also provide a 15-kVA transformer and 100-amp, 208-volt panel B to feed power to all convenience receptacles.
- Provide LED type, surface mounted, parking garage fixtures for the covered parking spaces. Provide pole mounted fixtures for the top-level garage spaces.
- Provide lighting controls to meet 2018 IECC requirements.

EOC and HQ Addition

- Provide a new utility pad-mounted transformer rated for 480/277-volts, 3-phase, 4-wire. This transformer will provide underground secondary power to two main switchboards. The first main switchboard 'MSB1' will serve the TEMA floors (first and second) and will be rated for 3000-amps with a 3000-amp main breaker. The second main switchboard 'MSB2' will serve the TNNG floors (third and fourth) and will be rated for 2000-amps with a 2000-amp main breaker.

- There will be two 2000-kW generators provided for emergency backup power. These will provide N+1 backup power for floors 1 and 2, and will provide code minimum backup power for floors 3 and 4. Each generator will be provided with two main breakers, one rated for 3000-amps and the second one for 200-amps. Each generator will have a base-mounted day tank for diesel fuel with connections to the separate diesel fuel storage tanks that will provide 96-hours of backup run time.

IV.

- There will be a 3000-amp automatic transfer switch (ATS1) and a 200-amp ATS2 provided that connects to both generators. One generator will provide the primary source of power and the other will provide the backup source of power. The load side of each ATS will connect to 'MSB1' and 'MSB2' as follows:

V.

    - The 3000-amp ATS (ATS1) feeder will connect to a 3000-amp service-entrance rated ATS (ATS3), The normal side input of ATS3 will connect to the utility transformer secondary and the emergency side input will connect to the ATS1 feeder. Then the load side output of ATS3 will connect to 'MSB1'. This will provide backup power to the entire floors 1 and 2.
    - The 200-amp ATS (ATS2) feeder will connect to a emergency branch panel 'EDP' inside the building's main electrical room. 'EDP' will power code required items for floors 3 and 4.

<u>Design Criteria:</u>

- Lighting And Branch Circuit Panelboards
    - 480Y/277V panelboards will be Square D type "NF".
    - 208Y/120V panelboards will be Square D type "NQ".
    - Provide with copper bus.
    - Typed directories will be provided in each panelboard.
    - Main breakers will be provided where required by code.
    - A minimum of 10% spare circuit breakers will be provided in each panelboard.
- Cables, Wiring And Raceways
    - Cable and wiring will be copper conductors, color coded, and with 75°C rated insulation.
        - Aluminum conductors sizes #2AWG and larger can be provided as deduct alternate. Provide alternate pricing.
    - Lighting and receptacle branch circuit conductors #10AWG and smaller will be solid copper, type "THW", "THWN" or "THHN". Minimum size will be #12AWG, except for control wiring, which may be #14AWG, type "THHN".
    - Conductors #8 AWG and larger will be stranded copper with "THW" or "XHHW" insulation.
    - Final wiring connections to light fixtures and motors will be run in flexible metal conduit. Liquid tight flexible conduit will be used in wet locations or where exposed to the weather. Final flexible connections to motors and other vibrating equipment will be required to be a minimum 2ft long and a maximum of 4ft long.

- All wiring will be run in conduit. Minimum size conduit will be 1/2". A green-wire ground will be run in each conduit.
- Raceways inside the building will be electrical metallic tubing with compression fittings.
- Cable and conduit supports, couplings and fittings, pullboxes and other wiring materials and devices will be provided as required.
- MC type cable will be allowed.

- Receptacles
  - Receptacles will be provided in each new space per program requirements. At a minimum, each regularly occupied space will have at least one receptacle per wall. In renovation areas, existing receptacles to remain and receptacles added as needed for new space/equipment requirements.
  - Receptacle quantity and locations will comply with end user requirements.
  - Receptacles for maintenance and special equipment will be provided as required by code.
  - Receptacles for general use will be 20A, heavy duty, grounding type. Pass & Seymour plug tail or similar.
  - All receptacles in toilets, janitor closets and counter tops with sinks will be GFCI type.
  - All receptacles in exterior locations will be in-use extra duty weatherproof with weather-resistant GFCI type receptacles.
  - Normal power devices will be white in color and devices served from an emergency power source will be red.
  - Cover plates for normal power wall devices will be white nylon. Cover plates for emergency power wall devices will be red nylon. All plates for multiple gang requirements will be one-piece combination. All device cover plates shall be labeled with the associated panelboard and circuit identification.
  - Mounting heights will be per ADA requirements
  - Floor Boxes and Poke-throughs
    - Floor boxes will be flush mounted.
    - Floor service fittings will be combination type (duplex receptacle and telephone service), back-to-back design, extruded aluminum.
- Grounding
  - All lighting and branch circuit panelboards will be grounded per the NEC.
  - A separate green ground wire will be included in each circuit raceway.
  - A double ground path will be used in all patient areas.
- Mechanical Equipment Connections
  - Electrical power connections will be made to all mechanical equipment, plumbing, and fire protection equipment; including furnishing of all electrically associated devices such as disconnect switches, contactors, magnetic or manual starters, lock-out switches, etc., which are not furnished under the Mechanical, Plumbing or Fire Protection sections.

- Starters And Controls
    - All temperature control and mechanical equipment interlock wiring, raceways and associated devices will be provided per the Temperature Control System section. Refer to controls section for more information. All alarms, plumbing and fire protection control and equipment interlock wiring, raceways and associated devices will be provided per this section. All fire detection, alarm and communications wiring, raceways and associated devices will be provided per this section.
    - Magnetic starters will be combination type complete with fusible switch, auxiliary contacts, overload relays, individual fused control transformer, hand-off-automatic selector switch or start-stop push button, and pilot lights.
    - Reduced voltage starters will be provided for motors 75 horsepower and larger.
- Lightning And Surge Protection
    - A lightning protection system will be included for the new building addition. The system will connect to the existing building system as required for a UL Master Label certification.
    - Additional levels of SPD will also be provided at panelboards serving loads that are susceptible to transient surges. All life safety panelboards will have SPD protection.
- General Provisions For Communication Systems
    - Line voltage receptacles and power connections will be provided as required in telecom rooms to facilitate power to the equipment in the system racks.
    - A ground bar will be provided in new telecom room for the equipment systems.

Design Criteria:

- Code Requirements
  - The minimum lighting feeder and panel capacity will be designed in accordance with the NEC.
- Light Fixtures And Materials
  - Light fixtures will follow the Client standard.
    - Offices, conference rooms, lobby public toilets, and charting are to have 2x4 lighting with a center basket design equal to Lithonia FS Series.
    - All other areas with 2x4 lighting are to have acrylic lens lighting equal to Lithonia GTL series.
    - Vanities to have a single over mirror fixture equal to Lithonia FMVCCL series.
- Lighting Control System
  - The control system will utilize a computer based whole building control system that accepts standard BacNet, building management protocol equivalent to Automated logic WebCTRL. The control system is intended to be designed around Crestron as the basis of design. This system offers multiple scene and zone controls of the entire facility while allowing both a timed and astronomic automatic control. Daylight sensors will also be integrated into the Lobby/Reception area to separately control light fixtures close to windows.
  - Typically, occupancy sensors will be utilized for the automatic shut-off requirements. Occupant sensor controls shall be installed in the following space types:
    - Conference/meeting/multipurpose rooms
    - Lounges/breakrooms
    - Enclosed offices
    - Open plan offices
    - Restrooms
    - Storage rooms
  - Offices, conference rooms and similar spaces will have multi-level switching in addition to the required automatic shut-off controls.
  - Controls for daylight harvesting will be utilized in the spaces along exterior glass walls.
  - LED and Driver Specifications
    - LED will be 4000°K color temperature.
    - DALI 1% fully addressable drivers will be used throughout for maximum energy savings, silent operation, rated for universal voltage, single-phase operation, and have less than 10% Total Harmonic Distortion.

- Emergency Lighting Fixtures
  - Under emergency lighting conditions, a minimum illumination of 1 foot-candle will be maintained along the egress paths as required by code.
  - All emergency egress lighting and exit signage shall be connected to the life safety branch of the essential electrical system.
- Exterior Lighting
  - Exterior lighting for parking or drive areas will be pole mounted fixtures with LED lamps. Specific exterior lighting standards will be as required by local codes.
  - The walk-up area to the main building entrances will be illuminated by fixtures light bollards or fixtures on 8 feet to 10 feet tall poles. Accent lighting on the building facade will be provided. Lamp sources used for accent lighting will be selected based on the colors of the surfaces to be illuminated.
  - Building entrances/exits with soffits will be illuminated with recessed downlights. Building exits without soffits will be illuminated with wall mounted light fixtures with full cutoff optics.
- Exit lights fixtures will be low wattage LED type with red letters.

Division 28 – Fire Alarm and Security

South Parking Deck

- The new garage structure does not require a complete fire alarm system per code but the fire riser valves will need to be monitored by a control panel. Provide a fire alarm panel to monitor all fire riser valves per code.

EOC and HQ Addition

- General
  - The building is provided with an existing Honeywell Notifier System. The system is fully addressable emergency/voice evacuation fire alarm system with space for expansion. The system was replaced in 2014-2015. All modifications to the existing system shall be designed and installed in accordance with the requirements of National Fire Protection Association (NFPA) Standards NFPA 70, NFPA 72 and the applicable Building and Fire Codes.
- Existing Conditions
  - The Campus Fire Alarm control panel is existing to remain. During the design process the existing Fire Alarm Control Panel will be evaluated to confirm it has capacity to support the remodel and the addition. If it's determined the existing FACP does not have the capacity to protect the renovations to existing and new addition, the FACP will be replaced.

- Proposed Work
    - The system will provide automatic fire detection, occupant notification, air-handling unit shutdown, suppression system monitoring, door holder release and activation of combination fire and smoke dampers where required. All remote power supplies, amplifiers and other control equipment shall be located in electrical closets.
        - Smoke detection will be provided in all corridor areas and other required locations in healthcare occupancies.
        - Duct smoke detection will be provided in all air handling equipment over 2,000 CFM and within 5 feet of all smoke or fire/smoke dampers.
        - Manual pull stations will be provided in new addition at all exits from the building.
    - Typical layout for additional/relocated Audible and Visible Notification
        - Occupant notification will utilize audible (speakers) and visual (strobes) notification appliances provided as required for public mode notification throughout the building.
        - The notification speakers will also be used for general hospital paging/intercom and background music purposes. The speakers will be spaced appropriately for intelligibility of the multiple purposes of the system.
        - Connections will be provided to auxiliary systems including: nurse call, suppression system monitoring devices, including waterflow alarms, supervisory pressure switches, valve tamper switches including for the remote backflow preventers; the HVAC systems for air-handling unit shutdown.
    - Wiring: All new circuits cabling shall be installed to match existing.
    - Fire Alarm Control Panel: The fire alarm control panel is existing to remain. During the design process the existing Fire Alarm Control Panel will be evaluated to confirm it has capacity to support the remodel and the addition. If it's determined the existing FACP does not have the capacity to protect the existing and new addition, the FACP will be replaced.

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Current Code Requirements:

International Building Code (IBC), 2012 edition
International Fuel Gas Code (IFGC), 2012 edition
International Mechanical Code (IMC), 2012 edition
International Plumbing Code (IPC), 2012 edition
International Energy Conservation Code (IECC), 2012 edition
International Existing Building Code (IEBC), 2012 edition
NFPA 101 Life Safety Code, 2012 edition
National Electrical Code (NEC), 2017 edition
2010 ADA Standards

Anticipated Design and Construction Schedule

Design Schedule

Program Verification	60 days
Schematic Design	100 days
CM Selection	
Design Development– Early Release South Garage	60 days
Construction Documents – Early Release South Garage	60 days
Fire Marshal Review	30 days
Target Construction Start: 9/6/2024	
Design Development – Demo and Final Package	180 days
Construction Documents – Demo and Final Package	210 days
Fire Marshal Review	60 days
Target Construction Start: 5/20/2025	

Construction Schedule

Active Construction: 3 years
Target Completion: November 5, 2027

STATEMENT OF PROBABLE COST

Project Package 2

New Addition

Emergency Operations Center (EOC)
And
Headquarters Expansion

The presented costs represent construction costs only and do not include Furnishing, Fixtures and Equipment. No known environmental concerns are known at this time and this statement does not include any mitigation allowances.

Attachment A

Opinion of Probable Cost 1/9/2023

Divisional Breakdown			
Division	Description	Cost per	Budget Amount
1	General Requirements	$0.00	
2	Existing Conditions	$0.00	
3	Concrete	$58.81	$15,059,107.14
4	Masonry	$6.09	$1,559,476.00
5	Metals	$28.48	$7,291,216.63
6	Woods, Plastics, & Composites	$2.67	$683,693.22
7	Thermal and Moisture Protection	$31.36	$8,030,327.76
8	Openings	$23.36	$5,982,041.45
9	Finishes	$24.97	$6,394,437.67
10	Specialties	$2.31	$590,386.03
11	Equipment	$172.94	$44,280,000.00
12	Furnishings	$0.89	$228,124.00
13	Special Construction	$0.03	$6,469.80
14	Conveying Equipment	$2.19	$560,412.60
21	Fire Suppression	$8.89	$2,275,000.00
22	Plumbing	$49.81	$12,752,500.00
23	HVAC	$70.51	$18,054,350.00
26	Electrical and Communications	$70.06	$17,937,500.00
27	Communications	$0.00	$0.00
28	Electronic Safety & Security	$9.28	$2,375,000.00
31	Earthwork	$5.40	$1,381,600.00
32	Exterior Improvements	$73.17	$18,734,253.00
33	Utilities	$2.93	$750,000.00
		Subtotal Direct Cost of Work (DC)	**$164,925,895.30**
General Conditions (GC)- 10% of Subtotal Direct Cost of Work			$16,492,589.53
Permitting - ($2500+ (DC + GC)-$1000000)/1000)*2)			$363,336.97
		Subtotal w/ Direct Overhead	**$181,781,821.80**
General Contractor Overhead - 5% Subtotal w/ Direct Overhead			$ 9,089,091.09
General Contractor Profit - 6% of Subtotal w/ Direct Overhead + GC Overhead			$ 11,452,254.77
		Subtotal w/ General Contractors Markup	**$202,323,167.66**
Builder's Risk Insurance - 1.05% of Subtotal w/ Construction Contingency			$ 1,731,721.90
Performance & Payment Bond - 2% of Subtotal w/ Construction Contingency			$ 3,298,517.91
		Total Construction Cost	**$207,353,407.47**
Escalation -8% of Total Construction Cost per Year			$ 16,588,272.60
		Total Escalated Construction Cost to the Year 2024	**$223,941,680.07**